



This form should be used in addition to the AQ operating permit application forms, if you determine that you own or operate a waste combustor that requires a permit. Certain questions ask you to submit additional information specific to your waste generation activities and facility.

**1. Type of Permit**

Minnesota Rules, part 7007.0200, Subp. 4 requires those waste combustors for which U.S.EPA has promulgated standards under Sec. 129 of the Clean Air Act to obtain a Part 70 permit. Other waste combustors may select the type of permit they are applying for:

- I am applying for a Part 70 permit.  
 I am applying for a state permit.

**2. Describe the wastes to be combusted.**

**2.1. Class A, C, D, I, II, and III Waste Combustors:**

You must submit the results of a current solid waste composition study of the waste you combust. (Mn Rule Part 7007.0501, subp. 2.A.). The results shall contain at least the following:

- 2.1.1. Dates over which the study was conducted;
- 2.1.2. Methods used for sampling and analyzing waste;
- 2.1.3. Fractional Analysis: At a minimum, the fractional analysis shall include:
  - Weight % breakdown of combustible, non-combustible wastes
  - Weight % breakdown of: paper, cardboard, plastic, ferrous, nonferrous, other nonorganics, glass, organic, and solid wastes which contain mercury.
- 2.1.4. Ultimate Analysis:
  - Percentage of carbon, hydrogen, nitrogen, sulfur and oxygen by difference.
  - ASTM methods shall be used.
- 2.1.5. Heat Content of Waste.

**2.2. Class IV Waste Combustors:**

If you own or operate a Class IV waste combustor, you must submit the results of a current solid waste composition study of the waste you combust. The results shall contain at least the following:

- 2.2.1. Dates over which the study was conducted;
- 2.2.2. Methods used for sampling and analyzing waste;
- 2.2.3. Fractional Analysis: At a minimum, the fractional analysis shall include:
  - Weight % breakdown of combustible, non-combustible wastes
  - Weight % breakdown of: paper, cardboard, plastic, ferrous, nonferrous, other nonorganics, glass, organic, and solid wastes which contain mercury.
- 2.2.4. Heat Content of Waste. You may use published data to estimate the heat value of the solid waste stream. If published information is not available, you must use methods described in Minn. Rule part 7007.0501, subp. 2. A. (4) to determine the heat value of the solid waste stream.

**3. Describe the Waste Combustor Units. (Mn Rule Part 7007.0501, subp. 2. B.)**

Duplicate this table as needed.

Table 1. Waste Combustor Unit Description

	Unit 1	Unit 2	Unit 3
Manufacturer			
Model No.			
Type of Combustion Unit	<input type="checkbox"/> Modular <input type="checkbox"/> Massburn Waterwall <input type="checkbox"/> Massburn Refractory <input type="checkbox"/> RDF Spreader-Stoker <input type="checkbox"/> Fluidized Bed Combustor <input type="checkbox"/> Rotary Kiln <input type="checkbox"/> Other: _____	<input type="checkbox"/> Modular <input type="checkbox"/> Massburn Waterwall <input type="checkbox"/> Massburn Refractory <input type="checkbox"/> RDF Spreader-Stoker <input type="checkbox"/> Fluidized Bed Combustor <input type="checkbox"/> Rotary Kiln <input type="checkbox"/> Other: _____	<input type="checkbox"/> Modular <input type="checkbox"/> Massburn Waterwall <input type="checkbox"/> Massburn Refractory <input type="checkbox"/> RDF Spreader-Stoker <input type="checkbox"/> Fluidized Bed Combustor <input type="checkbox"/> Rotary Kiln <input type="checkbox"/> Other: _____
Design Capacity, MMBtu/hr			
Solid Waste Input Rate	_____ TPD or lbs/hr	_____ TPD or lbs/hr	_____ TPD or lbs/hr
Ave. Heat Value of Solid Waste, Btu/lb.			
Auxiliary Fuel System			
Fuel type:	<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane <input type="checkbox"/> Fuel Oil No. 2 <input type="checkbox"/> Fuel Oil No. 6 <input type="checkbox"/> Other: _____	<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane <input type="checkbox"/> Fuel Oil No. 2 <input type="checkbox"/> Fuel Oil No. 6 <input type="checkbox"/> Other: _____	<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane <input type="checkbox"/> Fuel Oil No. 2 <input type="checkbox"/> Fuel Oil No. 6 <input type="checkbox"/> Other: _____
Number of Burners:			
Class IV: Vol of Sec. Chamber, cu.ft.			
Class IV: Residence Time (Vol of Sec. Chamber/ flue gas flowrate), sec.			
Waste Feed:	<input type="checkbox"/> Pit with ram feed <input type="checkbox"/> Crane with Chute <input type="checkbox"/> Other: _____	<input type="checkbox"/> Pit with ram feed <input type="checkbox"/> Crane with Chute <input type="checkbox"/> Other: _____	<input type="checkbox"/> Pit with ram feed <input type="checkbox"/> Crane with Chute <input type="checkbox"/> Other: _____
Automatic Feed Shutoff Controls?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Maximum design feedrate of the solid waste fuel feed system	_____ tons/hr or lbs/hr (circle units)	_____ tons/hr or lbs/hr (circle units)	_____ tons/hr or lbs/hr (circle units)

Table 1. Continued

Air Pollution Control System	<input type="checkbox"/> Afterburner <input type="checkbox"/> Baghouse <input type="checkbox"/> (Circle:) Dry Scrubber or Spray Dryer <input type="checkbox"/> Dry Lime Injection <input type="checkbox"/> Cyclone <input type="checkbox"/> Electrostatic Precipitator <input type="checkbox"/> Powdered Activated Carbon <input type="checkbox"/> Wet Scrubber <input type="checkbox"/> Other (identify):	<input type="checkbox"/> Afterburner <input type="checkbox"/> Baghouse <input type="checkbox"/> (Circle:) Dry Scrubber or Spray Dryer <input type="checkbox"/> Dry Lime Injection <input type="checkbox"/> Cyclone <input type="checkbox"/> Electrostatic Precipitator <input type="checkbox"/> Powdered Activated Carbon <input type="checkbox"/> Wet Scrubber <input type="checkbox"/> Other (identify):	<input type="checkbox"/> Afterburner <input type="checkbox"/> Baghouse <input type="checkbox"/> (Circle:) Dry Scrubber or Spray Dryer <input type="checkbox"/> Dry Lime Injection <input type="checkbox"/> Cyclone <input type="checkbox"/> Electrostatic Precipitator <input type="checkbox"/> Powdered Activated Carbon <input type="checkbox"/> Wet Scrubber <input type="checkbox"/> Other (identify):
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**4. Additional Requirements for Completing Form GI-03, Site Plan.**

Form GI-03 must indicate the following items (Minn. Rule part 7007.0501, subp 2. C):

1. Storage space for solid waste to be combusted
2. Storage space for noncombustibles, recyclables and wastes prohibited from combustion, that are separated at the waste combustor.
3. Storage space for bulk chemicals used for operating waste combustor
4. Ash handling and storage facilities.

**5. Additional Requirements for Completing Form GI-02, Flow Diagram.**

Form GI-02, Flow Diagram, must show how ash is treated, stored and transported within the waste combustor stationary source or emission facility (Minn. Rule part 7007.0501, subp. 2. D), as well as the following:

1. Location of burners in the combustion system
2. Location of temperature monitors in the combustion and air pollution control system
3. Location of air flow monitors in the combustion system;
4. If you combust solid waste with another solid fuel, a description of how the system delivers both to the combustion chamber. Include a description of how the system mixes the fuels, ensuring that combustion is not suppressed when using multiple fuels.

**6. Performance Test Data (Minn. Rule Part 7007.0501, subp. 3).**

Applications for facility permit reissuance (Part 70 permits) shall include a summary of all emissions tests conducted during the life of the previous permit.

**7. Industrial Solid Waste Management Plan (Minn. Rule 7011.1250)**

You must prepare a plan that shows whether or not you will accept industrial waste, and how you will accept this waste, or otherwise dispose of waste delivered to your waste combustor unit that you will not combust. The plan must be prepared in accordance with Minn. Rule part 7035.2535, subp. 5, A and B, shall address the additional following wastes, and state whether the wastes will be accepted at the waste combustor:

- spilled fossil fuels and the sorbents used to collect the spilled fossil fuels
- infectious and pathological wastes

- media contaminated with oil
- problem materials as defined in Minnesota Statutes 115A.03, subd. 24a;
- other wastes that can be identified that if combusted, would adversely impact waste combustor operations or result in environmental or health problems.

## **8. Solid Wastes Which Contain Mercury**

### **8.1. Prepare a Plan.**

If this is a permit application for a Class C, D, III or IV waste combustor (as defined in Minn. Rules part 7011.1201), you must include with your permit application a mercury waste separation plan. Starting with Form HG-01, and as required by Minn. Rule Part 7011.1255, the plan shall:

1. Address the collection of at least: household batteries, electrical devices and switches, electric lighting components, and solid wastes from laboratories where mercury is used.
2. Identify the name and title of the person responsible for implementing the plan.
3. Identify which generators and solid wastes are targeted in the plan.
4. Describe how mercury wastes are separated, stored and disposed of.
5. Identify the person who identifies the wastes to be separated, who is responsible for the act of separating the waste from the solid waste stream, who collects and transports the wastes, and where the wastes are delivered.
6. Identify whether collected wastes are recycled or disposed of.
7. Estimate how much mercury will be removed each year with this plan.
8. Describe how you will make the public (or waste generators at your business) aware of this plan, and how you will enlist their cooperation and participation. See Minn. Rule Part 7011.1255 to learn when you must update this plan.

Attach to your permit application the plan that you have developed for your waste generators and waste combustor facility. This plan will become an enforceable condition in your permit (Minn. Rule part 7007.0801).

### **8.2. Revise the plan.**

The plan must be revised once every five years, so you should view this plan as dynamic, and responsive to changes in your facility's or waste shed's generating activities, waste types, product changes and other programs that affect the presence of mercury in products or discards.

## **9. Mixed Municipal Solid Waste or Refuse Derived Fuel Combustion Facilities: Reducing The Level Of Toxic Contaminants In Ash.**

### **9.1. Prepare a plan.**

If the permit application is for a waste combustor that will combust municipal solid waste or refuse derived fuel, you must:

- 9.1.1. Describe the specific functions to be performed, activities to be undertaken, and their timing, to the maximum extent feasible and prudent to reduce the total content and leachable levels of toxic contaminants in ash, reduce the amount of ash generated, or the amount of noncombustibles in the solid waste, and reduce the amount of processing residuals that require disposal.
- 9.1.2. Identify whether the function or activity will result in: a) reduction of toxic contaminants, b) reduce the amount of ash generated, or c) reduce the amount of solid waste processing residuals.

Attach to your permit application the plan that you have developed for your waste combustor and service area.

**9.2. Calculate the ratio of ash generated to the waste combusted for each of the previous five years:**

Table 2. Ratio of Ash Generated to MMSW/RDF Combusted

Year		Five 19	Four	Three	Two	One 20
Total amount of waste combusted (tons)	A					
Total amount of Flue gas conditioning chemicals used (tons)	B					
Amount of ash disposed (dry tons)	C					
Ratio of Ash generated to waste combusted	$\frac{C - B}{A}$					

**10. Ash Management Plan (Minn. rule Part 7007.0501, subp. 7):**

For each of your ash management and disposal methods, complete table 3 or 4.

Table 3. Landfilling Sites for Waste Combustor Ash

	Landfill Name	Permit Number	Date Available to Accept Ash
Location 1			
Location 2			
Location 3			
Location 4			

Table 3. Ash Utilization Projects

	Ash Utilization Project Title	Treatment Process	Permit Number	Date Available to Accept Ash
Location 1				
Location 2				
Location 3				
Location 4				

Do you generate ash quench water?  Yes  No

If yes, how do you dispose of the quench water? \_\_\_\_\_

NPDES or SDS (water quality) permit number: \_\_\_\_\_

**11. Class IV Waste combustors: Design and Operating Requirements (Minn. Rules part 7011.1235, Subp. 1).**

Minnesota Rules part 7011.1235, subp. 1 establishes a minimum stack height for Class IV waste combustors. Supplementary form WC-01(stack) is available to determine the minimum stack height required, and how to demonstrate that an alternative methods attains an equivalent stack height.