MINNESOTA POLLUTION CONTROL AGENCY

DRAFT Air Individual Permit
Part 70 Reissuance
11100036-101

Permittee:	**Perham Resource Recovery Facility**
Co-permittee name:	**Prairie Lakes Municipal Solid Waste Authority**
Facility name:	**Perham Resource Recovery Facility** 201 6th Ave NE Perham, MN 56573-2331 Otter Tail County

Expiration date: [TBD - five years from issuance]
* All Title I Conditions do not expire

Part 70 Reissuance: [TBD]

Permit characteristics: Federal; Part 70/ Major for NSR

The emission units, control equipment and emission stacks at the stationary source authorized in this permit reissuance are as described in the submittals listed in the Permit Applications Table.

This permit reissuance supersedes Air Emission Permit No. 11100036- 004 and authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in the permit. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Unless otherwise indicated, all the Minnesota rules cited as the origin of the permit terms are incorporated into the SIP under 40 CFR § 52.1220 and as such are enforceable by U.S. Environmental Protection Agency (EPA) Administrator or citizens under the Clean Air Act.

Signature: ( )

This document has been electronically signed.

for Steven S. Pak, P.E., Manager
Air Quality Permits Section
Industrial Division

for the Minnesota Pollution Control Agency

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1. Permit applications table

Title description	Application receipt date	Action number
Administrative Amendment	07/11/2013	11100036-101
Part 70 Reissuance, supplemental information submitted on 03/23/2026	09/22/2017	11100036-101

2. Where to send submittals

Send submittals that are required to be submitted to the EPA regional office to:

Chief Air Enforcement
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by Minn. R. 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204M)
Washington, D.C. 20460

Send any application for a permit or permit amendment to:

Fiscal Services – 6th Floor
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Document Coordinator notices of:

a. Accumulated insignificant activities
b. Installation of control equipment
c. Replacement of an emissions unit, and
d. Changes that contravene a permit term

Unless another person is identified in the applicable Table, send all other submittals to:

AQ Compliance Tracking Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Or

Email a signed and scanned PDF copy to:
submitstacktest.pca@state.mn.us
(for submittals related to stack testing)
AQRoutineReport.PCA@state.mn.us
(for other compliance submittals)
(See complete email instructions in "Routine Air Report Instructions Letter" at https://www.pca.state.mn.us/sites/default/files/aq-f6-15.pdf)

3. Facility description

The Perham Resource Recovery Facility (Facility) is located at 201 6th Ave NE, Perham, Otter Tail County, Minnesota.

Perham Resource Recovery Facility (PRRF) is a waste combustor facility that includes two waste combustion units that can operate individually. Each unit can process up to 100 tons of waste per day with a heat input rate of 45.8 MMBtu/hr.

The waste combustors generate steam which is sold locally. Each waste combustor has a primary and secondary combustion chamber, heat recovery boiler and economizer, and air pollution control equipment. Pollution control equipment consists of dry lime injection for the control of acid gases, activated carbon injection for the control of mercury and dioxin/furans, and fabric filters for the control of particulate matters (PM, PM10, and PM2.5) and other metals.

Exhaust combustion gases from each waste combustor are continuously monitored for carbon monoxide (CO), sulfur dioxide (SO2), oxygen (O2), and opacity. Operating parameters, including fabric filter inlet temperature, steam flow rate, and activated carbon feed rate parameters are also monitored continuously for each waste combustor unit.

Performance testing is conducted for each waste combustion unit. Exhaust gases from both units are ultimately combined and exhausted to the atmosphere through a combined stack. Each waste combustion unit is also equipped with a dump stack for use in the event of an emergency.

PRRF also includes an 83.5 MMBtu/hr natural gas auxiliary boiler with low NOX burners and flue gas recirculation for NOX control, and a materials recovery facility (MRF) where all incoming waste is sorted and undesired wastes for combustion and recyclables are removed prior to combustion.

Ash produced during waste combustion is loaded in an enclosed area, covered, and transported via trucks to the Northeast Ottertail Ash Landfill.

4. Summary of subject items

SI ID: Description	Relationship type	Related SI ID: Description
TFAC 2: Perham Resource Recovery Facility		
ACTV 1: All IAs		
COMG 3: Continuous Emission Monitors	has members	EQUI 9, EQUI 10, EQUI 11, EQUI 14, EQUI 17, EQUI 19, EQUI 31, EQUI 41, EQUI 42
COMG 4: Continuous Opacity Monitors	has members	EQUI 15, EQUI 44
EQUI 7: DAS	receives from	EQUI 9: South Unit O2/CO/SO2 Monitor - O2
EQUI 7: DAS	receives from	EQUI 10: South Unit O2/CO/SO2 Monitor - CO
EQUI 7: DAS	receives from	EQUI 11: South Unit O2/CO/SO2 Monitor - SO2
EQUI 7: DAS	receives from	EQUI 14: South Unit NOx Monitor
EQUI 7: DAS	receives from	EQUI 15: South Unit Opacity
EQUI 7: DAS	receives from	EQUI 17: South Unit inlet O2/SO2 - O2
EQUI 7: DAS	receives from	EQUI 19: South Unit inlet O2/SO2 - SO2
EQUI 7: DAS	receives from	EQUI 31: North Unit O2/CO/SO2 Monitor - O2
EQUI 7: DAS	receives from	EQUI 41: North Unit O2/CO/SO2 Monitor - CO
EQUI 7: DAS	receives from	EQUI 42: North Unit O2/CO/SO2 Monitor - SO2
EQUI 7: DAS	receives from	EQUI 44: North Unit Opacity
EQUI 8: Baghouse Pressure Drop - TREA 1		
EQUI 9: South Unit O2/CO/SO2 Monitor - O2		
EQUI 10: South Unit O2/CO/SO2 Monitor - CO		
EQUI 11: South Unit O2/CO/SO2 Monitor - SO2		
EQUI 12: South Unit Steam Flow		
EQUI 13: Baghouse Pressure Drop - TREA 4		
EQUI 14: South Unit NOx Monitor		
EQUI 15: South Unit Opacity		
EQUI 17: South Unit inlet O2/SO2 - O2		
EQUI 19: South Unit inlet O2/SO2 - SO2		
EQUI 20: North Unit Temperature - Secondary		
EQUI 21: South Unit Temperature - Secondary		
EQUI 25: Boiler Pressure		
EQUI 26: North Unit Temperature - Primary		
EQUI 27: South Unit Temperature - Primary		
EQUI 28: South Unit Pressure		
EQUI 29: North Unit Pressure		
EQUI 30: Baghouse Inlet Temp - TREA 1		
EQUI 31: North Unit O2/CO/SO2 Monitor - O2		
EQUI 32: North Unit Steam Flow		
EQUI 33: Auxiliary	is monitored	EQUI 25: Boiler

SI ID: Description	Relationship type	Related SI ID: Description
Boiler w/ FGR and low NOx burners	by	Pressure
EQUI 33: Auxiliary Boiler w/ FGR and low NOx burners	sends to	STRU 4: Auxiliary Boiler Stack
EQUI 33: Auxiliary Boiler w/ FGR and low NOx burners	is controlled by	TREA 8: Flue Gas Recirculation
EQUI 33: Auxiliary Boiler w/ FGR and low NOx burners	is controlled by	TREA 9: Low NOx burners
EQUI 35: South MSW Incinerator	sends to	EQUI 7: DAS
EQUI 35: South MSW Incinerator	is monitored by	EQUI 9: South Unit O2/CO/SO2 Monitor - O2
EQUI 35: South MSW Incinerator	is monitored by	EQUI 10: South Unit O2/CO/SO2 Monitor - CO
EQUI 35: South MSW Incinerator	is monitored by	EQUI 11: South Unit O2/CO/SO2 Monitor - SO2
EQUI 35: South MSW Incinerator	is monitored by	EQUI 12: South Unit Steam Flow
EQUI 35: South MSW Incinerator	is monitored by	EQUI 14: South Unit NOx Monitor
EQUI 35: South MSW Incinerator	is monitored by	EQUI 15: South Unit Opacity
EQUI 35: South MSW Incinerator	is monitored by	EQUI 17: South Unit inlet O2/SO2 - O2
EQUI 35: South MSW Incinerator	is monitored by	EQUI 19: South Unit inlet O2/SO2 - SO2
EQUI 35: South MSW Incinerator	is monitored by	EQUI 21: South Unit Temperature - Secondary
EQUI 35: South MSW Incinerator	is monitored by	EQUI 27: South Unit Temperature - Primary
EQUI 35: South MSW Incinerator	is monitored by	EQUI 28: South Unit Pressure
EQUI 35: South MSW Incinerator	sends to	STRU 2: South Unit Dump Stack - EQUI 35
EQUI 35: South MSW Incinerator	sends to	STRU 5: Combined MWC Stack
EQUI 35: South MSW Incinerator	is controlled by	TREA 4: Fabric Filter - High Temperature, i.e., T>250 Degrees F
EQUI 35: South MSW Incinerator	is controlled by	TREA 5: Dry Limestone Injection
EQUI 35: South MSW Incinerator	is controlled by	TREA 6: Activated Carbon Adsorption
EQUI 36: North MSW Incinerator	sends to	EQUI 7: DAS
EQUI 36: North MSW Incinerator	is monitored by	EQUI 20: North Unit Temperature - Secondary
EQUI 36: North MSW Incinerator	is monitored by	EQUI 26: North Unit Temperature - Primary
EQUI 36: North MSW Incinerator	is monitored by	EQUI 29: North Unit Pressure
EQUI 36: North MSW Incinerator	is monitored by	EQUI 31: North Unit O2/CO/SO2 Monitor - O2
EQUI 36: North MSW Incinerator	is monitored by	EQUI 32: North Unit Steam Flow
EQUI 36: North MSW Incinerator	is monitored by	EQUI 41: North Unit O2/CO/SO2 Monitor - CO
EQUI 36: North MSW Incinerator	is monitored by	EQUI 42: North Unit O2/CO/SO2 Monitor - SO2
EQUI 36: North MSW Incinerator	is monitored by	EQUI 44: North Unit Opacity
EQUI 36: North MSW Incinerator	sends to	STRU 3: North Unit Dump

SI ID: Description	Relationship type	Related SI ID: Description
		Stack - EQUI 36
EQUI 36: North MSW Incinerator	sends to	STRU 5: Combined MWC Stack
EQUI 36: North MSW Incinerator	is controlled by	TREA 1: Fabric Filter - High Temperature, i.e., T>250 Degrees F
EQUI 36: North MSW Incinerator	is controlled by	TREA 2: Dry Limestone Injection
EQUI 36: North MSW Incinerator	is controlled by	TREA 3: Activated Carbon Adsorption
EQUI 41: North Unit O2/CO/SO2 Monitor - CO		
EQUI 42: North Unit O2/CO/SO2 Monitor - SO2		
EQUI 43: Baghouse Inlet Temp - TREA 4		
EQUI 44: North Unit Opacity		
FUGI 1: Traffic and Paved Roads		
STRU 2: South Unit Dump Stack - EQUI 35		
STRU 3: North Unit Dump Stack - EQUI 36		
STRU 4: Auxiliary Boiler Stack		
STRU 5: Combined MWC Stack		
STRU 6: Roof Exhauster Fan		
STRU 7: Roof Exhauster Fan		
STRU 8: Roof Exhauster Fan		
STRU 9: Roof Exhauster Fan		
STRU 10: B2T1		
STRU 11: B1T1 - 1st tier		
STRU 12: B1T1 - 2nd tier		
STRU 13: BLD 3		
STRU 14: BLD 4		
TREA 1: Fabric Filter - High Temperature, i.e., T>250 Degrees F	sends to	EQUI 7: DAS
TREA 1: Fabric Filter - High Temperature, i.e., T>250 Degrees F	is monitored by	EQUI 8: Baghouse Pressure Drop - TREA 1
TREA 1: Fabric Filter - High Temperature, i.e., T>250 Degrees F	is monitored by	EQUI 30: Baghouse Inlet Temp - TREA 1
TREA 2: Dry Limestone Injection		
TREA 3: Activated Carbon Adsorption	is controlled in series by	TREA 1: Fabric Filter - High Temperature, i.e., T>250 Degrees F
TREA 3: Activated Carbon Adsorption	is controlled in series by	TREA 2: Dry Limestone Injection
TREA 4: Fabric Filter - High Temperature, i.e., T>250 Degrees F	sends to	EQUI 7: DAS
TREA 4: Fabric Filter - High Temperature, i.e., T>250 Degrees F	is monitored by	EQUI 13: Baghouse Pressure Drop - TREA 4
TREA 4: Fabric Filter - High Temperature, i.e., T>250 Degrees F	is monitored by	EQUI 43: Baghouse Inlet Temp - TREA 4
TREA 5: Dry Limestone Injection		
TREA 6: Activated Carbon Adsorption	is controlled in series by	TREA 4: Fabric Filter - High Temperature, i.e., T>250 Degrees F
TREA 6: Activated Carbon Adsorption	is controlled in series by	TREA 5: Dry Limestone Injection
TREA 8: Flue Gas Recirculation		
TREA 9: Low NOx burners	is controlled in series by	TREA 8: Flue Gas Recirculation

5. Limits and other requirements

Requirement number	Requirement and citation
TFAC 2	**Perham Resource Recovery Facility**
5.1.1	Ash Testing: Conduct ash sampling at least quarterly in accordance with Minn. R. 7035.2910 to form an annual composite sample. The Permittee shall analyze the annual composite sample in accordance with Minn. R. 7035.2910, subp. 4, item A, tables 1 and 2. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. [Minn. R. 7000.7000, variance, (10/18/96), Minn. R. 7007.0801, subp. 2(D), Minn. R. 7035.2910, subp. 3]
5.1.2	Monitoring Equipment: Install or make needed repairs to all monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued. [Minn. R. 7007.0800, subp. 4(D)]
5.1.3	The Permittee must maintain records adequate to document compliance at the stationary source, including at a minimum: (1) the date, place, and time of sampling or measurement; (2) the date or dates the analyses were performed; (3) the company or entity that performed the analyses; (4) the analytical techniques or methods used; (5) the results of such analyses; and (6) the operating conditions existing at the time of sampling or measurement. [Minn. R. 7007.0800, subp. 5(A)]
5.1.4	The Permittee shall prepare and maintain a plan for the management of industrial solid wastes in accordance with Minn. R. 7035.2535, subp. 5, items A and B. The plan must also include the contents listed in Minn. R. 7011.1250, subp. 2 (listed below). The Permittee shall modify the industrial waste management plan whenever the management practices or solid wastes identified in the plan have changed. The Permittee shall submit the amended plan to the commissioner for approval. The industrial solid waste management plan must address how the following additional categories of solid waste will be managed to comply with the requirements of Minn. R. 7035.2535, subp. 5, item A, subitems (2) to (4), as well as state whether each of the following solid wastes will be accepted at the facility: A. spilled fossil fuels and the sorbents used to collect the spilled fossil fuels; B. infectious and pathological wastes; C. media contaminated with oil; D. problem materials as defined in Minnesota Statutes, section 115A.03, subdivision 24a; and E. any other solid wastes that can be identified that would adversely impact waste combustor operations or result in environmental and health problems if combusted. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. [Minn. R. 7011.1250, subp. 1-3]
5.1.5	Ash Toxicity: Abide by a plan to reduce the level of toxic contaminants in ash, consistent with Minn. R. 7007.0501, subp. 6(A). This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. [Minn. R. 7007.0501, subp. 6]
5.1.6	Abide by a plan for the disposal and/or utilization of ash and quench water consistent with Minn. R. 7007.0501, subp. 7.

Requirement number	Requirement and citation
	This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. [Minn. R. 7007.0501, subp. 7]
5.1.7	Abide by the industrial waste management plan prepared in accordance with Minn. R. 7011.1250. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. [Minn. R. 7007.0801, subp. 2(E)]
5.1.8	The Permittee shall design, construct, and operate the facility in compliance with the solid waste management requirements as set forth in items A to H. Plans required in the items in Minn. R. 7011.1245 shall identify those required portions of the plan which are not applicable. A. security requirements in Minn. R. 7035.2535, subp. 3; B. general inspection requirements in Minn. R. 7035.2535, subp. 4; C. household hazardous waste management requirements of Minn. R. 7035.2535, subp. 6, D. emergency preparedness and prevention plans and emergency procedures shall be prepared in accordance with Minn. R. 7035.2595 and 7035.2605. E. contingency action plans in Minn. R. 7035.2615; F. closure plans and procedures in Minn. R. 7035.2625; G. solid waste transfer facility requirements as required in Minn. R. 7035.2865; and H. infectious waste management plan (if Permittee chooses to accept infectious waste), in accordance with Minn. R. 7035.9100 to 7035.9150. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1245]
5.1.9	Ash Testing Plan: Submit ash testing plan and amendments to the plan to the Commissioner for approval. The plan must contain the information in Minn. R. 7035.2910, subp. 6(A) - (H). This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. [Minn. R. 7007.0801, subp. 2(D), Minn. R. 7035.2910, subp. 6]
5.1.10	The Permittee must prepare and regularly update a plan to identify, separate, and collect before combustion of solid wastes which contain mercury. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. [Minn. R. 7011.1255, subp. 1, Minn. R. 7011.1255, subp. 3]
5.1.11	The Permittee shall implement a plan as described in Minn. R. 7011.1255 to identify, separate, and collect solid wastes which contain mercury before the mercury is combusted. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. [Minn. R. 7007.0801, subp. 2(F)]
5.1.12	QA Plan required: The Permittee must develop and implement a written quality assurance plan which covers each CEMS and COMS. The plan shall be on site and available for inspection within 30 days after monitor certification. The plan shall contain the written procedures listed in Minn. R. 7017.1210, subp. 1. [Minn. R. 7017.1170, subp. 2, Minn. R. 7017.1210, subp. 1]
5.1.13	Reporting: All submittals required by this permit must be certified by a responsible official as defined in Minn. R. 7007.0100, subp. 21. All submittals must be postmarked or received by the date specified in this permit. [Minn. R. 7007.0800, subp. 6(A), Minn. R. 7011.1285, subp. 1]
5.1.14	Emergency Preparedness and Prevention: The Permittee shall maintain and test, at least annually, the required equipment for emergency preparedness and prevention. The Permittee must also prepare and maintain a procedural manual to use in times of emergency. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7035.2595]
5.1.15	Emergency Response and Reporting: In the event of an emergency, including but not limited to fire or explosion, submit to MPCA within two weeks a written report describing the emergency, the response, and an evaluation of the effectiveness of the response in accordance with Minn. R. 7035.2995 and Minn. R. 7035.2605. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1245, Minn. R.

Requirement number	Requirement and citation
	7035.2595, Minn. R. 7035.2605]
5.1.16	HCl Performance Test Report: The Permittee must include the SO2 CEMS data recorded during the time of the performance test as an appendix to the test report. The Permittee must also include chlorine in the ultimate fuel analysis included as part of the Waste Composition Study. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7017.2017, Minn. R. 7017.2035, subp. 3]
5.1.17	All incoming municipal solid waste shall be processed, except for instances when the Permittee has determined, by pre-approval, that a hauler's specific loads do not need to be processed. [Minn. R. 7007.0800, subp. 2(A)]
5.1.18	Processed Mixed Municipal Solid Waste: "Processed mixed municipal solid waste" shall be defined as mixed municipal solid waste, as provided in Minn. Stat. Section 115A.03, subdivision 21, which has been: 1) Evaluated by a trained inspector; and, 2) Any objectionable materials, as identified by a trained inspector, have been physically removed. [Minn. R. 7007.0800, subp. 2(A)]
5.1.19	Objectionable Material: "Objectionable material" shall be defined as that material which is not conducive to the combustion process and has been set aside for further processing and/or alternative disposal rather than combustion. This definition includes materials that likely may contain mercury. Objectionable materials shall not be combusted. [Minn. R. 7007.0800, subp. 2(A)]
5.1.20	Pre-approved Haulers: A trained inspector may allow pre-approved waste loads to bypass processing upon the following conditions: 1) The source of the particular load is known by the trained inspector to contain consistent waste materials and is not likely to contain any objectionable materials; 2) A trained inspector shall inspect an incoming load to verify that it is of a known consistency and is not likely to contain any objectionable materials; 3) At least annually, the trained inspector shall inspect an additional incoming load from that hauler to confirm that it remains a known, consistent waste load that is not likely to contain any objectionable materials; 4) The trained inspector shall record, at a minimum, the following information for each load which is inspected for either pre-approval or annual confirmation of approval: - the date of delivery; - the source of the delivery; - a reasonable estimate of the quantity of the delivery; and, - a description of the load material. 5) The inspection information shall be recorded and kept on-site and be available for inspection. [Minn. R. 7007.0800, subp. 4]
5.1.21	Environmental Compliance Operating Manual: Within the existing Environmental Compliance Operating Manual required by this permit, the Permittee must include a definition for objectionable materials that have been identified, as well as specific criteria which shall be used to identify materials that may be added to the objectionable materials list. The Permittee must annually update the Environmental Compliance Operating Manual's objectionable material list, the pre-approved hauler list, and trained inspector list. [Minn. R. 7007.0800, subp. 5]
5.1.22	Recordkeeping of Inspector Training: As part of the operating record, the identity of all personnel who received training to inspect unprocessed municipal solid waste for the presence of objectionable materials shall be recorded along with date and duration of the training. [Minn. R. 7007.0800, subp. 5]
5.1.23	Minn. R. 7011.1201-1285 are state-only requirements for this permit and are not enforceable by the U.S. Environmental Protection Agency (EPA) Administrator and citizens under the Clean Air Act. [Minn. R. 7011.0010, subp. 1]

Requirement number	Requirement and citation
5.1.24	Permit Appendices: This permit contains appendices as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in Appendices. Appendix F, G, and I are the most up-to-date versions as of permit issuance and are listed in this permit for reference. The Permittee must comply with all current plans approved by the commissioner. A. Insignificant activities and general applicable requirements; B. NOX and PM2.5 Modeling Parameters for Permit Number 11100036-004; C. 40 CFR pt. 60, Subpart A - General Provisions; D. 40 CFR pt. 63, Subpart A - General Provisions; E. 40 CFR pt. 63, Subpart DDDDD-National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; F. Industrial Solid Waste Management Plan; G. Ash Management Plan; H. Waste Composition Study; I. Mercury Waste Separation Plan; J. 1996 MSW Combustor Ash Testing Variance; and K. 1997 Perham Resource Recovery Facility (PRRF) Variance. Modeling parameters in Appendix B. NOX and PM2.5 Modeling Parameters for Permit Number 11100036-004 are included for reference only as described elsewhere in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B)]
5.1.25	Modeled Parameters for NOX and PM2.5: The parameters used in NOX and PM2.5 modeling for permit number 11100036-004 are listed in Appendix B of this permit. The parameters describe the operation of the facility at maximum permitted capacity. The purpose of listing the parameters in the appendix is to provide a benchmark for future changes. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.1.26	Equivalent or Better Dispersion (EBD) Modeling Triggers (Modeling Required) for PM2.5: Any changes that affect any modeled PM2.5 parameter or emission rate listed in Appendix B, or an addition to the information documented in Appendix B, trigger the EBD Remodeling Submittal requirement. This includes changes that do not require a permit amendment as well as changes that require any type of permit amendment. Changes made under the Administrative amendment process are excluded from this requirement. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.1.27	Computer Dispersion Modeling Triggers for PM2.5: The Permittee must conduct a refined remodeling analysis if: (1) The EBD Modeling Submittal requirement was triggered but the Permittee chose not to or was not eligible to submit an EBD analysis; (2) The Permittee submitted an EBD analysis but the results of the EBD modeling analysis do not demonstrate equivalent or better dispersion characteristics or the submittal was not approved; or (3) the location of the ambient air boundary is being modified, unless the new boundary completely encompasses the original boundary. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.1.28	The Permittee must comply with Minn. Stat. 116.385. The Permittee may not use trichloroethylene at its permitted facility including in any manufacturing, processing, or cleaning processes, except as described in Minn. Stat. 116.385, subd. 2(b) and 4. This is a state-only requirement and is not enforceable by the U.S. Environmental Protection Agency (EPA) Administrator and citizens under the Clean Air Act. [Minn. R. 7007.0100, subp. 7(X), Minn. Stat. 116.385]
5.1.29	PERMIT SHIELD: Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

Requirement number	Requirement and citation
	This permit shall not alter or affect the liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance. [Minn. R. 7007.1800(A)(2)]
5.1.30	The Permittee must comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0090. Compliance must be demonstrated upon written request by the MPCA. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.1.31	Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted. [Minn. R. 7011.0020]
5.1.32	The Permittee must at all times properly operate and maintain the facilities and systems of treatment and control and the appurtenances related to them that are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. [Minn. R. 7007.0800, subp. 16(J)]
5.1.33	Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 16(J)]
5.1.34	Operation Changes: In any shutdown, breakdown, or deviation the Permittee must immediately or as soon as possible considering plant and personnel safety take all practical steps to modify operations to reduce the emission of any regulated air pollutant. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment are permitted to operate. [Minn. R. 7019.1000, subp. 4]
5.1.35	Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150. [Minn. R. 7011.0150]
5.1.36	Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the U.S. Environmental Protection Agency (EPA) Administrator and citizens under the Clean Air Act. [Minn. R. 7030.0010-7030.0080]
5.1.37	Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A). [Minn. R. 7007.0800, subp. 9(A)]
5.1.38	The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16. [Minn. R. 7007.0800, subp. 16]
5.1.39	Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in this permit. [Minn. R. ch. 7017]
5.1.40	Performance Test Notifications and Submittals: Performance Test Notification and Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due seven days before each Performance Test Performance Test Report: due 45 days after each Performance Test The Notification, Test Plan, and Test Report must be submitted in a format specified by the commissioner. [Minn. R. 7017.2017, Minn. R. 7017.2030, subps. 1-4, Minn. R. 7017.2035, subps. 1-2]

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5.1.41	Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's follow up compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025, subp. 3]
5.1.42	Monitoring Equipment Calibration - The Permittee shall either: 1. Calibrate or replace required monitoring equipment every 12 months; or 2. Calibrate at the frequency stated in the manufacturer's specifications. For each monitor, the Permittee shall maintain a record of all calibrations, including the date conducted, and any corrective action that resulted. The Permittee shall include the calibration frequencies, procedures, and manufacturer's specifications (if applicable) in the Operations and Maintenance Plan. Any requirements applying to continuous emission monitors are listed separately in this permit. [Minn. R. 7007.0800, subp. 4(D)]
5.1.43	Operation of Monitoring Equipment: Unless noted elsewhere in this permit, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system. [Minn. R. 7007.0800, subp. 4(D)]
5.1.44	Recordkeeping: Retain all records at the stationary source, unless otherwise specified within this permit, for five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A). [Minn. R. 7007.0800, subp. 5(C)]
5.1.45	Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes. [Minn. R. 7007.0800, subp. 5(B)]
5.1.46	If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format. [Minn. R. 7007.1200, subp. 4]
5.1.47	These following 40 CFR 52.21(r)(6) requirements apply if a reasonable possibility (RP) as defined in 40 CFR 52.21(r)(6)(vi) exists that a proposed project, analyzed using the actual-to-projected-actual (ATPA) test (either by itself or as part of the hybrid test at 40 CFR 52.21(a)(2)(iv)(f)) and found to not be part of a major modification, may result in a significant emissions increase (SEI). If the ATPA test is not used for the project, or if there is no RP that the proposed project could result in a SEI, these requirements do not apply to that project. The Permittee is only subject to the Preconstruction Documentation requirement for a project where a RP occurs only within the meaning of 40 CFR 52.21(r)(6)(vi)(b). Even though a particular modification is not subject to New Source Review (NSR), or where there isn't a RP that a proposed project could result in a SEI, a permit amendment, recordkeeping, or notification may still be required by Minn. R. 7007.1150 - 7007.1500. [Minn. R. 7007.0800, subp. 2(A), Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]
5.1.48	Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee

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	shall document the following: 1. Project description 2. Identification of any emission unit whose emissions of an NSR pollutant could be affected 3. Pre-change potential emissions of any affected existing emission unit, and the projected post-change potential emissions of any affected existing or new emission unit. 4. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded due to increases not associated with the modification and that the emission unit could have accommodated during the baseline period, an explanation of why the amounts were excluded, and any creditable contemporaneous increases and decreases that were considered in the determination. The Permittee shall maintain records of this documentation. [Minn. R. 7007.0800, subps. 4-5, Minn. R. 7007.1200, subp. 4, Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]
5.1.49	Post-change Emissions - The Permittee shall monitor the actual emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using the ATPA test, and the potential emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using potential emissions in the hybrid test. The Permittee shall calculate and maintain a record of the sum of the actual and potential (if the hybrid test was used in the analysis) emissions of the regulated pollutant, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit of any unit associated with the project. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]
5.1.50	The Permittee must submit a report to the Agency if the annual summed (actual, plus potential if used in hybrid test) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR 52.21(b)(23). Such report shall be submitted to the Agency within 60 days after the end of the year in which the exceedances occur. The report shall contain: a. The name and ID number of the Facility, and the name and telephone number of the Facility contact person; b. The annual emissions identified in the Post-change Emissions requirement (above); and c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]
5.1.51	Shutdown Notifications: Notify the commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the Permittee does not have advance knowledge of the shutdown, the Permittee must notify the commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in items A, B, and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator must inform the commissioner of the cause of the shutdown and the estimated duration. The owner or operator must notify the commissioner when the shutdown is over. [Minn. R. 7019.1000, subp. 3]
5.1.52	Breakdown Notifications: Notify the commissioner within 24 hours of a breakdown of more than one hour of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in items A, B, and C of Minn. R. 7019.1000,

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	subp. 2. At the time of notification or as soon as possible thereafter, the Permittee must inform the commissioner of the cause of the breakdown and the estimated duration. The Permittee must notify the commissioner when the breakdown is over. [Minn. R. 7019.1000, subp. 2]
5.1.53	Notification of Deviations Endangering Human Health or the Environment: Immediately after discovery of the deviation or immediately after when the deviation reasonably should have been discovered, notify the commissioner either orally or by e-mail, or telephone the state duty officer at 800-422-0798 or 651-649-5451, of any deviation from permit conditions that could endanger human health or the environment. [Minn. R. 7019.1000, subp. 1]
5.1.54	Notification of Deviations Endangering Human Health or the Environment Report: Within two working days of discovery, notify the commissioner in writing of any deviation from permit conditions that could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation. [Minn. R. 7019.1000, subp. 1]
5.1.55	Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed. Upon adoption of a new or amended federal applicable requirement, and if there are three or more years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150 - 7007.1500]
5.1.56	Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H). Performance testing deadlines from the General Provisions of 40 CFR pt. 60 and pt. 63 are examples of deadlines for which the MPCA does not have authority to grant extensions and therefore do not meet the requirements of Minn. R. 7007.1400, subp. 1(H). [Minn. R. 7007.1400, subp. 1(H)]
5.1.57	Within 15 days of a request from the Commissioner, the Permittee must provide a complete summary of all performance tests required at the facility including the subject item, pollutant, most recent test date (if applicable), and the date of the next test in an approved format. [Minn. R. 7007.0800, subp. 16(L)]
5.1.58	Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. Submit in a format specified by the Commissioner. [Minn. R. 7019.3000-7019.3100]
5.1.59	Emission Fees: due 30 days after receipt of an MPCA bill. [Minn. R. 7002.0005-7002.0085]
COMG 3	**Continuous Emission Monitors**
5.2.1	Additional monitoring requirements may apply. The Permittee is responsible for meeting all applicable requirements. [Minn. R. 7007.0800, subp. 4(A)]
5.2.2	Sulfur Dioxide: Emissions Monitoring: The Permittee must use a CEMS to measure emissions from EQUI 35. [40 CFR pt. 60, subp. AAAA, Minn. R. 7011.1260, Minn. R. 7011.1293, Minn. R. 7017.1010, subp. 1]
5.2.3	Sulfur Dioxide: Emissions Monitoring: The Permittee must use a CEMS to measure emissions from EQUI 36. [40 CFR pt. 62, subp. JJJ, Minn. R. 7011.1260, Minn. R. 7011.1295, Minn. R. 7017.1010, subp. 1]

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5.2.4	Carbon Monoxide: Emissions Monitoring: The Permittee must use a CEMS to measure emissions from EQUI 35. [40 CFR pt. 60, subp. AAAA, Minn. R. 7011.1260, Minn. R. 7011.1293, Minn. R. 7017.1010, subp. 1]
5.2.5	Carbon Monoxide: Emissions Monitoring: The Permittee must use a CEMS to measure emissions from EQUI 36. [40 CFR pt. 62, subp. JJJ, Minn. R. 7011.1260, Minn. R. 7011.1295, Minn. R. 7017.1010, subp. 1]
5.2.6	Nitrogen Oxides: If the Permittee wishes to take credit for operation of the NOX CEMS, EQUI 14, for the purposes of reporting actual emissions for emission inventory, the Permittee must install, operate, calibrate, and maintain the NOX CEMS in accordance with the Minn. R. ch. 7017. The NOX CEMS must be calibrated prior to the generation of data that will be used in the annual emissions calculation. [Minn. R. 7007.0800, subp. 4]
5.2.7	Continuous Operation: CEMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A CEMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment. [40 CFR 60.13(e), Minn. R. 7017.1010, subp. 1(A), Minn. R. 7017.1090]
5.2.8	QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan must be on site and available for inspection within 30 days after monitor certification. The plan must contain all of the information required by 40 CFR Part 60, Appendix F, Section 3. The plan must include the manufacturer's spare parts list for each CEMS and require that those parts be kept at the facility unless the Commissioner gives written approval to exclude specific spare parts from the list. [40 CFR pt. 60, Appendix F, 3, Minn. R. 7017.1010, subp. 1(C), Minn. R. 7017.1170, subp. 2]
5.2.9	CEMS QA/QC: The Permittee is subject to the performance specifications listed in 40 CFR pt. 60, Appendix B and shall operate, calibrate, and maintain each CEMS according to the QA/QC procedures in 40 CFR pt. 60, Appendix F as amended and maintain a written QA/QC program available in a form suitable for inspection. [40 CFR 60.13(a), 40 CFR pt. 60, Appendix F, Minn. R. 7017.1010, subp. 1(A)]
5.2.10	CEMS Daily Calibration Drift Test: Check calibration drifts at least once daily. The zero and span must be adjusted as specified in the applicable 40 CFR pt. 60, Appendix B Performance Specification. 40 CFR pt. 60, Appendix F, Section 4.3.1 must be used to determine out-of-control periods for CEMS. [40 CFR 60.13(d)(1), 40 CFR pt. 60, Appendix F, 4.1, Minn. R. 7017.1010, subp. 1(A), Minn. R. 7017.1170, subp. 3]
5.2.11	Recordkeeping: The Permittee shall retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source. [40 CFR 60.7(f), Minn. R. 7017.1130, Minn. R. 7019.0100, subp. 1]
5.2.12	CEMS Monitor Design: Each CEMS shall be designed to complete a minimum of one cycle of sampling, analyzing, and data recording in each 15-minute period. [40 CFR 60.13(e)(2), Minn. R. 7017.1010, subp. 1(A)]
5.2.13	The Permittee must submit start-up notification: Due 10 working days after Startup of Monitor Date. [Minn. R. 7007.0800, subp. 2(A)]
COMG 4	**Continuous Opacity Monitors**
5.3.1	Additional monitoring requirements may apply. The Permittee is responsible for meeting all applicable requirements. [Minn. R. 7007.0800, subp. 4(A)]
5.3.2	Emissions Monitoring: The owner or operator shall use a COMS to measure emissions from EQUI 35. [40 CFR pt. 60, subp. AAAA, Minn. R. 7011.1293, Minn. R. 7017.1010, subp 1]
5.3.3	Emissions Monitoring: The owner or operator shall use a COMS to measure emissions from EQUI 36. [40 CFR pt. 62, subp. JJJ, Minn. R. 7011.1295, Minn. R. 7017.1010, subp. 1]
5.3.4	Monitoring Data: All COMS data must be reduced to six-minute averages. Six-minute opacity averages

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	shall be calculated from 36 or more data points equally spaced over each six-minute period. [40 CFR 60.13(e)(1), 40 CFR 60.13(h)(2), Minn. R. 7017.1200, subp. 1-3]
5.3.5	Continuous Operation: COMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A COMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment. [40 CFR 60.13(e), Minn. R. 7017.1090]
5.3.6	QC Program: the facility owner or operator must conduct quality assurance and quality control as specified in Procedure 3 - Quality Assurance Requirements for Continuous Opacity Monitoring Systems at Stationary Sources, 40 CFR Pt. 60, Appendix F. [Minn. R. 7017.1215]
5.3.7	COMS Daily Calibration Drift Test: The Calibration Drift must be quantified and recorded at zero (low-level) and upscale (high-level) calibration drift at least once daily according to the procedures listed in 40 CFR 60.13(d)(2) and pt. 60, Appendix B, PS 1. The zero and upscale calibration levels must be determined using the span value specified in the applicable requirement. If the applicable requirement does not specify a span value, a span value of 60, 70, or 80 percent opacity must be used unless an alternative span value is approved by the commissioner. 40 CFR pt. 60, Appendix F must be used to determine out-of-control periods for COMS. [40 CFR 60.13(d)(1), Minn. R. 7017.1215]
5.3.8	COMS Calibration Error Audit Results Summary: due 30 days after end of each calendar quarter in which the COMS calibration error audit was completed. [Minn. R. 7017.1220]
5.3.9	Recordkeeping: The owner or operator must retain records of all COMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source. [Minn. R. 7017.1130]
5.3.10	Notification of Compliance Status: Due 30 days before performance test required by 40 CFR 60.8 if COMS data results will be used in lieu of 40 CFR, Part 60, Appendix A, Method 9 observation data to determine compliance with the opacity standard as allowed by 40 CFR 60.11(e)(5). [40 CFR 60.7(a)(7)]
EQUI 33	**Auxiliary Boiler w/ FGR and low NOx burners**
5.4.1	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
5.4.2	Recordkeeping: By the last day of each calendar month, the Permittee shall record the amount of natural gas combusted in the boilers during the previous calendar month. These records shall consist of purchase records, receipts, or fuel meter readings. [40 CFR 60.48c(g), Minn. R. 7011.0570]
5.4.3	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. A as follows: 40 CFR 60.1(a)-(c); 40 CFR 60.2; 40 CFR 60.3; 40 CFR 60.4; 40 CFR 60.5(a)-(b); 40 CFR 60.6(a)-(b); 40 CFR 60.7(a)(1), (3)-(7); 40 CFR 60.7(b)-(d); 40 CFR 60.8(a)-(i); 40 CFR 60.9; 40 CFR 60.11(a)-(d); 40 CFR 60.11(e)(1)-(8); 40 CFR 60.11(f)-(g); 40 CFR 60.12; 40 CFR 60.13(a)-(c); 40 CFR 60.13(d)(1)-(2); 40 CFR 60.13(e)(1)-(2);

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	40 CFR 60.13(f)-(g); 40 CFR 60.13(h)(1)-(3); 40 CFR 60.13(i)(1)-(9); 40 CFR 60.13(j)(1)-(2); 40 CFR 60.14(a)-(l); 40 CFR 60.15(a)-(g); 40 CFR 60.17; 40 CFR 60.18(b)-(f); 40 CFR 60.18(g)-(i); 40 CFR 60.19(a)-(e); and 40 CFR 60.19(f)(1)-(4). A copy of 40 CFR pt. 60, subp. A is included in Appendix C. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR pt. 60, subp. A, 40 CFR pt. 60, subp. Dc, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(A), Minn. R. 7011.0570, Minn. R. 7017.1010 & 7017.2015, subp. 2, Minn. R. 7019.0100]
5.4.4	The Permittee must comply with all applicable requirements of 40 CFR pt. 63, subp. DDDDD, as follows: 40 CFR 63.7480; 40 CFR 63.7485; 40 CFR 63.7490(a)(1); 40 CFR 63.7490(d); 40 CFR 63.7495(b); 40 CFR 63.7495(d); 40 CFR 63.7499(l); 40 CFR 63.7500(a); 40 CFR 63.7500(a)(1); 40 CFR 63.7500(a)(3); 40 CFR 63.7500(b); 40 CFR 63.7505(a); 40 CFR 63.7515(d), five year tune-up frequency; 40 CFR 63.7540(a); 40 CFR 63.7540(a)(10); 40 CFR 63.7540(a)(12), units with continuous oxygen trim systems; 40 CFR 63.7540(a)(13); 40 CFR 63.7540(b); 40 CFR 63.7545(a); 40 CFR 63.7545(f); 40 CFR 63.7545(h); 40 CFR 63.7550(a); 40 CFR 63.7550(b), five year tune-up frequency; 40 CFR 63.7550(c); 40 CFR 63.7550(c)(1); 40 CFR 63.7550(c)(5)(i)-(iii), (xiv), and (xvii); 40 CFR 63.7550(h)(3); 40 CFR 63.7555(a)(1); 40 CFR 63.7555(h); 40 CFR 63.7560;

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	40 CFR 63.7565; 40 CFR 63.7570; 40 CFR 63.7575; 40 CFR pt. 63, subp. DDDDD, Table 3, item 1 ; 40 CFR pt. 63, subp. DDDDD, Table 9; and 40 CFR pt. 63, subp. DDDDD, Table 10. A copy of 40 CFR pt. 63, subp. DDDDD is included in Appendix E. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR pt. 63, subp. DDDDD, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.7050]
5.4.5	The Permittee must comply with all applicable requirements of 40 CFR pt. 63, subp. A as follows: 40 CFR 63.1 40 CFR 63.2; 40 CFR 63.3; 40 CFR 63.4; 40 CFR 63.5; 40 CFR 63.6(a); 40 CFR 63.6(b)(1)-(b)(5); 40 CFR 63.6(b)(7); 40 CFR 63.6(c); 40 CFR 63.6(f)(2) and (3); 40 CFR 63.6(g); 40 CFR 63.6(i); 40 CFR 63.6(j); 40 CFR 63.7(a)-(d); 40 CFR 63.7(e)(2)-(e)(9), (f), (g), and (h); 40 CFR 63.8(a) and (b); 40 CFR 63.8(c)(1), (c)(1)(ii), (c)(2)-(c)(9); 40 CFR 63.8(d)(1) and (2); 40 CFR 63.8(d)(3), except for the last sentence, which refers to a startup, shutdown, and malfunction plan. Startup, shutdown, and malfunction plans are not required; 40 CFR 63.8(e); 40 CFR 63.8(f); 40 CFR 63.8(g); 40 CFR 63.9; 40 CFR 63.10(a); 40 CFR 63.10(b)(1); 40 CFR 63.10(b)(2)(i); 40 CFR 63.10(b)(2)(iii); 40 CFR 63.10(b)(2)(vi); 40 CFR 63.10(b)(2)(vii)-(xiv); 40 CFR 63.10(c)(1)-(c)(9), (c)(12) and (13); 40 CFR 63.10(d)(1); 40 CFR 63.10(d)(2); 40 CFR 63.10(d)(4); 40 CFR 63.10(e); 40 CFR 63.10(f);

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	40 CFR 63.12; 40 CFR 63.13; 40 CFR 63.14; 40 CFR 63.15; and 40 CFR 63.16. A copy of 40 CFR pt. 63, subp. A is included in Appendix D. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR 63.7565, 40 CFR pt. 63, subp. A, 40 CFR pt. 63, subp. DDDDD (Table 10), Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(B), Minn. R. 7011.7050, Minn. R. 7017.1010 & 7017.2015, subp. 3, Minn. R. 7019.0100]
EQUI 35	**South MSW Incinerator**
5.5.1	Applicability of Standards: The standards of Minn. R. 7011.1229, Minn. R. 7011.1230, Minn. R. 7011.1233, Minn. R. 7011.1240, subp. 2, and Minn. R. 7011.1272, subp. 2, apply at all times when waste is being continuously burned, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction does not exceed three hours. Fugitive emissions standards applicable to ash conveying systems do not apply during maintenance and repair of ash conveying systems. "Malfunction" means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown are not considered malfunctions. The start-up period commences when the waste combustor begins the continuous burning of solid waste and does not include any warm-up period when the waste combustor is combusting fossil fuel or other solid fuel. Continuous burning is the continuous, semicontinuous, or batch feeding of solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of solid waste solely to provide thermal protection of the grate or hearth during the start-up period when municipal solid waste is not being fed to the grate is not considered to be continuous burning. [Minn. R. 7011.1215, subp. 4]
5.5.2	The emission limits and operating requirements of 40 CFR pt. 60, subp. AAAA apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction. Each startup, shutdown, or malfunction must not last for longer than 3 hours. A maximum of 3 hours of test data can be dismissed from compliance calculations during periods of startup, shutdown, or malfunction. During startup, shutdown, or malfunction periods longer than 3 hours, emissions data cannot be discarded from compliance calculations and all provisions under 40 CFR 60.11(d) apply. [40 CFR 60.1205, 40 CFR 60.1220, Minn. R. 7011.1293]
5.5.3	The Permittee must not cause to be emitted into the atmosphere gases in excess of the standards of performance under Minn. R. 7011.1229. [Minn. R. 7011.1225, subp. 2a]
5.5.4	The Permittee must use data from the continuous emission monitoring systems (CEMs) for sulfur dioxide and carbon monoxide to demonstrate continuous compliance with the emission limits in this permit. [40 CFR 60.1235, Minn. R. 7011.1293]
5.5.5	The Permittee must limit Particulate Matter <= 24 milligrams per dscm, 3-run average (run duration

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	specified in test method) measured at 7% oxygen. [40 CFR 60.1210(b)(5), 40 CFR 60.1215, Minn. R. 7011.1293]
5.5.6	The Permittee must limit Particulate Matter <= 0.020 grains per dry standard cubic foot. This limit is applied in accordance with the "Applicability of Standards" stated in this permit. [Minn. R. 7011.1229]
5.5.7	The Permittee must limit Filterable Particulate Matter <= 0.015 grains per dry standard cubic foot. This limit is applied in accordance with the "Applicability of Standards" stated in this permit. [Minn. R. 7011.1229]
5.5.8	The Permittee must limit Muni Waste Combust Organics <= 30 nanograms per dscm, measured as total PCDD/PCDF. The Permittee must use 40 CFR pt. 60, Appendix A, Method 23, as amended, to determine compliance with the PCDD/PCDF emission limits. The minimum sample time is four hours per test run. An oxygen or carbon dioxide measurement must be obtained simultaneously with each Method 23 test run for PCDD/PCDF. The average of the PCDD/PCDF test runs is used to determine compliance. [Minn. R. 7011.1229, Minn. R. 7011.1265, subp. 3(B)]
5.5.9	The Permittee must limit Muni Waste Combust Organics <= 13 nanograms per dscm measured as Dioxins/furans (total mass basis), 3-run average (minimum run duration is 4 hours) measured at 7% oxygen. [40 CFR 60.1210(a), 40 CFR 60.1215, Minn. R. 7011.1293]
5.5.10	The Permittee must limit Cadmium <= 0.020 milligrams per dscm 3-run average (run duration specified in test method) measured at 7% oxygen. [40 CFR 60.1210(b)(2), 40 CFR 60.1215, Minn. R. 7011.1293]
5.5.11	The Permittee must limit Lead <= 0.20 milligrams per dscm, 3-run average (run duration specified in test method) measured at 7% oxygen. [40 CFR 60.1210(b)(2), 40 CFR 60.1215, Minn. R. 7011.1293]
5.5.12	The Permittee must limit Mercury <= 100 micrograms per dscm (short-term), or 85% removal. [Minn. R. 7011.1229]
5.5.13	The Permittee must limit Mercury <= 60 micrograms per dscm (long-term), or 85% removal. [Minn. R. 7011.1229]
5.5.14	The Permittee must limit Mercury <= 0.080 milligrams per dscm, or 85% reduction of potential mercury emissions, 3-run average (run duration specified in test method), measured at 7% oxygen. [40 CFR 60.1210(b)(3), 40 CFR 60.1215, Minn. R. 7011.1293]
5.5.15	The Permittee must limit Mercury <= 41.0 micrograms per dscm. This limit is applied in accordance with Minn. R. 7011.1240, subps. 2 and 5, and Minn. R. 7011.1272, subp. 2. The Permittee must follow the requirements specified in 40 CFR 60.1300 regarding sampling methods and other testing requirements, and Minn. R. 7011.1265, subp. 3(C) and Minn. R. 7011.1265, subp. 3(D). [Minn. R. 7007.0800, subp. 2(A)]
5.5.16	The Permittee must limit Opacity <= 10 percent opacity 6-minute average, calculated using 36 or more data points equally spaced over a six-minute period. [40 CFR 60.1210(b)(4), 40 CFR 60.1215, Minn. R. 7011.1229, Minn. R. 7011.1260, subp. 4(F), Minn. R. 7011.1293]
5.5.17	The Permittee must limit Carbon Monoxide <= 100 parts per million 4-hour block average, arithmetic mean, measured at 7% oxygen. Compliance is determined by continuous emission monitoring systems. The averaging period for carbon monoxide must be a daily 24-hour arithmetic average measured between 12 midnight and the following midnight. The four-hour and 24-hour average must be calculated from one-hour arithmetic averages. At least four points equally spaced in time shall be used to calculate each one-hour average. During periods of calibration, quality assurance audits, and routine maintenance, only two data points during the hour, at least 15 minutes apart, are required to calculate an hourly average. Each one-hour average must be corrected to seven percent oxygen on an hourly basis using the one-hour arithmetic average of the oxygen or carbon dioxide continuous emissions monitoring system. [40 CFR 60.1210(d)(1), 40 CFR 60.1215, Minn. R. 7011.1229, Minn. R. 7011.1260, subp. 4(C), Minn. R. 7011.1293]

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5.5.18	The Permittee must limit Hydrogen Chloride <= 25 parts per million by dry volume or 95% reduction of potential hydrogen chloride emissions, 3-run average (minimum run duration is 1 hour), measured at 7% oxygen. [40 CFR 60.1210(c)(1), 40 CFR 60.1215, Minn. R. 7011.1293]
5.5.19	The Permittee must limit Hydrogen Chloride <= 25 parts per million or 90% control. [Minn. R. 7011.1229]
5.5.20	The Permittee must limit Nitrogen Oxides <= 500 parts per million by dry volume, measured at 7% oxygen. No monitoring, testing, recordkeeping, or reporting is required to demonstrate compliance. [40 CFR 60.1210(c)(2), 40 CFR 60.1215, Minn. R. 7011.1293]
5.5.21	The Permittee must limit Sulfur Dioxide <= 30 parts per million 24-hour block average geometric concentration by dry volume, measured at 7% oxygen or 80% reduction of potential sulfur dioxide emissions. Determine compliance by emission monitoring system. For sulfur dioxide, the geometric average of the one-hour arithmetic average emission concentration during each 24-hour daily period measured from midnight to midnight. At least four data points equally spaced in time shall be used to calculate each one-hour arithmetic average. During periods of calibration, quality assurance audits, and routine maintenance, only two data points during the hour, at least 15 minutes apart, are required to calculate an hourly average. Each one-hour average must be corrected to seven percent oxygen on an hourly basis using the one-hour arithmetic average of the oxygen or carbon dioxide continuous emissions monitoring system. [40 CFR 60.1210(c)(3), 40 CFR 60.1215, Minn. R. 7011.1229, Minn. R. 7011.1260, subp. 4(D), Minn. R. 7011.1293]
5.5.22	The Permittee must limit fugitive ash Visible Emissions <= 5 percent of the hourly observation period using three 1-hour observation periods, as determined by 40 CFR pt. 60, Appendix A, Method 22, as amended. [40 CFR 60.1210(d)(2), 40 CFR 60.1215, Minn. R. 7011.1293]
5.5.23	The Permittee must limit Steam Flow <= 27,715 pounds per hour 4-hour block average. This is 110% of the steam production during the most recent EQUI 35 test (May 14-16, 2024) that demonstrated compliance for PCDD/PCDF emissions. Steam production shall not exceed 27,715 pounds per hour until a new test is conducted to establish a new maximum steam production capacity or as allowed by Minn. R. 7011.1240, subp. 5. [40 CFR 60.1200(a), Minn. R. 7011.1240, subp. 5, Minn. R. 7011.1260, subp. 4(B), Minn. R. 7011.1265, subp. 7, Minn. R. 7011.1293, Minn. R. 7017.2025, subp. 3]
5.5.24	The Permittee must vent emissions from EQUI 35 to control equipment meeting the requirements of TREA 4, 5, and 6 whenever EQUI 35 operates. [Minn. R. 7007.0800, subp. 16(J)]
5.5.25	EQUI 35 is exempt from limits on load level, temperature at the inlet of the particulate matter control device, and carbon feed rate during any of five situations: (1) During annual tests for dioxins/furans. (2) During annual mercury tests (for carbon feed rate requirements only). (3) During the 2 weeks preceding annual tests for dioxins/furans. (4) During the 2 weeks preceding annual mercury tests (for carbon feed rate requirements only). (5) Whenever the Administrator or delegated State authority permits the Permittee to do any of five activities: (i) Evaluate system performance. (ii) Test new technology or control technologies. (iii) Perform diagnostic testing. (iv) Perform other activities to improve the performance of EQUI 37. (v) Perform other activities to advance the state of the art for emission controls for EQUI 37. [40 CFR 60.1200(e), Minn. R. 7011.1293, Minn. R. 7017.2025, subp. 3]

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5.5.26	For projects of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions and the project can be accomplished within 14 days, the Permittee shall submit a written notification 30 days prior to undertaking any of the activities identified to waive the maximum demonstrated capacity (load level) limit, with the following information: (1) a description of the proposed project, and the outcome the project is designed to evaluate; (2) how the project conforms with the activities described in this subpart for which the maximum demonstrated capacity limit can be waived; and (3) the length of time the project will take to complete. [Minn. R. 7011.1240, subp. 5, Minn. R. 7017.2025, subp. 3]
5.5.27	After the required date for full or provisional certifications, the Permittee must not operate EQUI 37 unless one of four employees is on duty: (a) A fully certified chief facility operator. (b) A provisionally certified chief facility operator who is scheduled to take the full certification exam. (c) A fully certified shift supervisor. (d) A provisionally certified shift supervisor who is scheduled to take the full certification exam. [40 CFR 60.1190, Minn. R. 7011.1293]
5.5.28	A chief facility operator or shift supervisor who holds a certificate as described in Minn. R. 7011.1281, subp. 1 must be present at the waste combustor facility at all times when solid waste is being combusted, except if individuals are assuming the duties of chief facility operator or shift supervisor, the individuals must obtain full certification as described in Minn. R. 7011.1281 within six months of assuming such duties. [Minn. R. 7011.1240, subp. 1(A), Minn. R. 7011.1240, subp. 1a, Minn. R. 7011.1281]
5.5.29	A "fully certified operator" means: A. a person who has obtained "certified municipal waste combustor examiner" certification as described in Minn. R. 7011.1282; B. a person who has obtained both "provisional certification" and "operator certification" according to ASME QRO-1-1994, incorporated by reference in Minn. R. 7011.1205; or C. a person who is a "fully certified operator" as described in Minn. R. 7011.1284. [Minn. R. 7011.1281, subp. 1]
5.5.30	Criteria; fully certified operator. A. To be eligible as a fully certified operator, an individual must maintain a provisional certificate from ASME or a certificate described in Minn. R. 7011.1280, and pass an examination administered by the waste combustor's certified municipal waste combustor examiner. B. The examination shall test comprehensive understanding of the content and procedures described in the waste combustor's operating manual that is required to be prepared for the facility by Minn. R. 7011.1275, subp. 3. C. If changes are made in equipment and/or operating procedures which the initial certification did not address, certificate holders shall demonstrate to the facility's certified examiner detailed knowledge of these changes within six months after the change is made. If the demonstration of knowledge has not been made within six months, the certificate shall expire. [Minn. R. 7011.1284,

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5.5.31	If the certified chief facility operator and certified shift supervisor both are unavailable, a provisionally certified control room operator at EQUI 35 may fulfill the certified operator requirement. Depending on the length of time that a certified chief facility operator and certified shift supervisor are away, the Permittee must meet one of three criteria: (a) When the certified chief facility operator and certified shift supervisor are both offsite for 12 hours or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. (b) When the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, the Permittee must record the period when the certified chief facility operator and certified shift supervisor are offsite and include that information in the annual report as specified under 40 CFR 60.1410(l). (c) When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, the Permittee must take two actions: (1) Notify the Administrator in writing. In the notice, state what caused the absence and what is being done to ensure that a certified chief facility operator or certified shift supervisor is onsite. (2) Submit a status report and corrective action summary to the Administrator every 4 weeks following the initial notification. If the Administrator notifies the Permittee that the status report or corrective action summary is disapproved, EQUI 35 may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90-day period such that the Administrator withdraws the disapproval, EQUI 35 operation may continue. [40 CFR 60.1195, Minn. R. 7011.1293]
5.5.32	Start-up on waste prohibited. During start-up from a cold furnace, the Permittee must use auxiliary fuels to achieve combustion chamber operating temperature. The use of solid waste solely to provide thermal protection of the grate or hearth during the start-up period when solid waste is not being fed to the grate is not considered to be continuous burning. [Minn. R. 7011.1240, subp. 3]
5.5.33	The Permittee must use natural gas to warm the combustion chamber and pollution control devices, and maintain good combustion conditions in the combustion chamber from the time the waste feed has been discontinued until the combustion chamber is clear of combustible material or active combustion ceases. [Minn. R. 7007.0800, subp. 2(A)]
5.5.34	Fuel Type: Natural gas, solid waste, RDF, and mixed municipal solid waste as defined in Minn. Stat. 115A.03, subp. 21, and other nonhazardous wastes approved through the Permittee's Industrial Solid Waste Management Plan. The Permittee is authorized to burn waste tires, yard waste, and household hazardous waste that are incidentally received co-mingled with municipal solid waste. The Permittee must not combust waste tires, yard waste, or household hazardous waste as a separate waste stream. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1220, subp. 2]
5.5.35	The dumpstack of a waste combustor must not be used for conducting routine inspection or maintenance on the control equipment or the combustion system without prior approval of the commissioner. A dumpstack shall only be used at a waste combustor when plant or worker safety would be in

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	jeopardy without its use. The Permittee must record in the daily operating record required in Minn. R. 7011.1285, subp. 2, the date of use of the dumpstack, the length of time the dumpstack was used, the operating conditions of the waste combustor during dumpstack use, and the reason for using the dumpstack. [Minn. R. 7011.1240, subp. 7]
5.5.36	Three types of employees must complete the EPA or State-approved operator training course: (1) Chief facility operators. (2) Shift supervisors. (3) Control room operators. These employees must complete the operator training course by the date before an employee assumes responsibilities that affect operation of EQUI 35. [40 CFR 60.1160, Minn. R. 7011.1293]
5.5.37	Each chief facility operator and shift supervisor must obtain and keep a current provisional operator certification from the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in 40 CFR 60.17(g)(17) or a current provisional operator certification from the coursework and examination program set forth in Minn. R. 7011.1280, subp. 3. Each chief facility operator and shift supervisor must obtain a provisional certification by six months after they transfer to the municipal waste combustion unit or six months after they are hired to work at EQUI 35. [40 CFR 60.1185(a) and (b), Minn. R. 7011.1293]
5.5.38	A person shall be certified as an operator provided the person can demonstrate the completion of: A. ASME provisional certification as described in Standard for the Qualification and Certification of Resource Recovery Facility Operators, American Society of Mechanical Engineers (ASME) QRO-1-1994, incorporated by reference in Minn. R. 7011.1205, for chief facility operators, shift supervisors, and control room operators of municipal waste combustors; or B. the coursework and examination program set forth in Minn. R. 7011.1280, subp. 3. [Minn. R. 7011.1280, subp. 1(A)]
5.5.39	Control room operators shall be certified as described in Minn. R. 7011.1280. Individuals, if assuming the duties of control room operator for the first time, shall obtain certification as described in Minn. R. 7011.1280 within six months of assuming such duties. [Minn. R. 7011.1240, subp. 1a(A)(5)]
5.5.40	Each chief facility operator and shift supervisor must take one of three actions: (1) Obtain a full certification from the American Society of Mechanical Engineers or a State certification as described in Minn. R. 7011.1281. (2) Schedule a full certification exam with the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in 40 CFR 60.17(g)(17) and Minn. R. 7011.1205). (3) Schedule a full certification exam with the State of Minnesota certification program as described in Minn. R. 7011.1281. The chief facility operator and shift supervisor must obtain the full certification or be scheduled to take the certification exam by six months after they transfer to the municipal waste combustion unit or six months after they are hired to work at the municipal waste combustion unit. [40 CFR 60.1185(c) and (d), Minn. R. 7011.1293]
5.5.41	Individuals, if assuming the duties of chief facility operator or shift supervisor shall have obtained full certification as described in Minn. R. 7011.1281 within six months of assuming such duties. [Minn. R. 7011.1240, subp. 1a(A)(4), Minn. R. 7011.1281]
5.5.42	For plant-specific training, the Permittee must develop a specific operating manual and update your manual annually. The Permittee must include the following 11 items in the operating manual: (a) A summary of all applicable requirements in 40 CFR pt. 60, subp. AAAA.

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	(b) A description of the basic combustion principles that apply to EQUI 35. (c) Procedures for receiving, handling, and feeding municipal solid waste. (d) Procedures to be followed during periods of startup, shutdown, and malfunction of EQUI 35. (e) Procedures for maintaining a proper level of combustion air supply. (f) Procedures for operating EQUI 35 in compliance with the requirements contained in 40 CFR pt. 60, subp. AAAA. (g) Procedures for responding to periodic upset or off-specification conditions. (h) Procedures for minimizing carryover of particulate matter. (i) Procedures for handling ash. (j) Procedures for monitoring emissions from the municipal waste combustion unit. (k) Procedures for recordkeeping and reporting. The Permittee must keep the operating manual in an easily accessible location at the plant. It must be available for review or inspection by all employees who must review it and by the Administrator. [40 CFR 60.1170(a) and (c), 40 CFR 60.1175, 40 CFR 60.1180, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1293]
5.5.43	The Permittee shall develop and update on a yearly basis a site specific operating manual that shall, at a minimum, address the following elements of waste combustor unit operation: A. a summary of the applicable state rules and federal regulations to the activities described in the facility's air emissions permit; B. a description of basic combustion principles and theory applicable to the facility's waste combustor units; C. procedures for receiving, handling, and feeding municipal solid waste; D. waste combustor unit start-up, shutdown, and malfunction procedures; E. procedures for maintaining proper combustion air levels and supply; F. procedures for operating the waste combustor within the standards established in Minn. R. 7011.1201 to 7011.1294; G. procedures for responding to periodic upset or off-specification conditions; H. procedures for minimizing particulate matter carryover; I. procedures for monitoring the degree of solid waste burnout; J. procedures for handling ash; K. procedures for monitoring waste combustor emissions; L. procedures for reporting and record keeping; M. timetables and procedures for routine inspection and maintenance of equipment affecting air emissions; N. procedures for activating communications and alarm systems; and O. procedures to implement the facility's industrial waste management plan. The operating manual shall be kept in a location easily accessed by waste combustor personnel who have responsibilities which affect the operation of the waste combustor, including, but not limited to, chief facility operators, shift supervisors, operator supervisors, control room personnel, ash handlers, maintenance personnel, and crane/load handlers. The Permittee must update the manual following each performance test to include operational changes resulting from emission performance testing results and include the revision dates within the operating manual. [Minn. R. 7011.1275, subp. 3]
5.5.44	The Permittee shall establish a program to review the plant-specific operating manual with people whose responsibilities affect the operation of the waste combustor. Initial review by the date before an employee assumes responsibilities that affect operation of the waste combustor unit. Waste combustor personnel shall review the operating manual relevant to a newly assigned position before assumption of new job-related activities affecting air emissions.

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	The Permittee shall update and review the manual with staff annually. The Permittee must record the date of initial review and annual update and review. [40 CFR 60.1170(b),(c),&(d), Minn. R. 7011.1293]
5.5.45	Waste combustor facility personnel who have responsibilities which affect the operation of the waste combustor, including, but not limited to, chief facility operators, shift supervisors, operator supervisors, control room personnel, ash handlers, maintenance personnel, and crane/load handlers must complete a program of instruction and on-the-job training based on the operating manual described in Minn. R. 7011.1275, subp. 3. The program must train facility personnel to maintain compliance with Minn. R. 7011.1201 to 7011.1294. Individual training shall be specific to the position held and shall, at a minimum, address the items in Minn. R. 7011.1275, subp. 3. For waste combustor personnel described in Minn. R. 7011.1275, subp. 2, the training program shall require: - initial review of the operating manual prior to assumption of any job-related activities affecting air emissions; -review of the operating manual relevant to a newly assigned position before assumption of new job-related activities affecting air emissions; and -annual review of the operating manual. [Minn. R. 7011.1275, subp. 1(A),(B),&(D)]
5.5.46	Personnel without waste combustor or boiler operation experience must initially review the operating manual and work under the direct supervision of a certified operator or a certified operator's designee before assumption of job-related activities affecting air emissions for a minimum of 40 hours. The Permittee must record the dates of the training sessions and the number of hours trained in each session. [Minn. R. 7011.1275, subp. 1(C)(1)]
5.5.47	All employees with responsibilities that affect how a municipal waste combustion unit operates must complete the plant-specific training course. Include at least six types of employees: (a) Chief facility operators. (b) Shift supervisors. (c) Control room operators. (d) Ash handlers. (e) Maintenance personnel. (f) Crane or load handlers. [40 CFR 60.1165, Minn. R. 7011.1293]
5.5.48	Training Program: Waste combustor personnel who have responsibilities which affect the operation of the waste combustor, including, but not limited to, chief facility operators, shift supervisors, operator supervisors, control room personnel, ash handlers, maintenance personnel, and crane/load handlers, must complete a program of instruction and on-the-job training based on the operating manual. The program must train facility personnel to maintain compliance with Minn. R. 7011.1201 to 7011.1294. Individual training shall be specific to the position held and shall, at a minimum, address the items in Minn. R. 7011.1275, subp. 3. The Permittee must: - Implement the training program for personnel; - Identify all personnel who must be trained; - Include a separate page for each personnel in the operating record; - Record the names of those who have been trained, the type of training received, the number of training hours, and the date training was completed. The Permittee must maintain as a part of the operating record required by Minn. R. 7011.1285, subp. 2, a record of the identity of all personnel who have received training and the number of training

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	hours. The records shall be provided to the commissioner on demand. [Minn. R. 7011.1275, subp. 1-2, Minn. R. 7011.1275, subp. 4]
5.5.49	The Permittee must keep the following records: (a) Records of provisional certifications. Include three items: (1) For the municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are provisionally certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program. (2) Dates of the initial provisional certifications. (3) Documentation showing current provisional certifications. (b) Records of full certifications. Include three items: (1) For the municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are fully certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program. (2) Dates of initial and renewal full certifications. (3) Documentation showing current full certifications. (c) Records showing completion of the operator training course. Include three items: (1) For the municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who have completed the EPA or State municipal waste combustion operator training course. (2) Dates of completion of the operator training course. (3) Documentation showing completion of operator training course. (d) Records of reviews for plant-specific operating manuals. Include three items: (1) Names of persons who have reviewed the operating manual. (2) Date of the initial review. (3) Dates of subsequent annual reviews. (e) Records of when a certified operator is temporarily offsite. Include two main items: (1) If the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours but for 2 weeks or less and no other certified operator is onsite, record the dates that the certified chief facility operator and certified shift supervisor were offsite. (2) When all certified chief facility operators and certified shift supervisors are offsite for more than 2 weeks and no other certified operator is onsite, keep records of four items: (i) A notice that all certified persons are offsite. (ii) The conditions that cause these people to be offsite. (iii) The corrective actions taken to ensure a certified chief facility operator or certified shift supervisor is onsite. (iv) Copies of the written reports submitted every 4 weeks that summarize the actions taken to ensure that a certified chief facility operator or certified shift supervisor will be onsite. (f) Records of calendar dates. Include the calendar date on each record. [40 CFR 60.1355, Minn. R. 7011.1293]
5.5.50	Record of certified operators. The Permittee shall maintain at the waste combustor facility for five years a record of the names of all personnel that the examiner has certified. This record shall contain the examination dates, the nature or content of the examination, the full name of the individual certified, the date of certification, and the signature of the certified examiner for that facility with the following certification:

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	"I certify under penalty of law that, based on my examination of these persons, these persons have demonstrated the knowledge and skills that qualify these persons to be fully certified operators at Perham Resource Recovery Facility in accordance with the procedures of Minnesota Rules, parts 7011.1280 to 7011.1284." The Permittee shall maintain at the waste combustor facility for five years a record of the names of all personnel who have obtained provisional and/or full certification by ASME. The Permittee shall allow the commissioner to review all records related to the certification of operators, including the facility's program for the examination and certification of operators, the record required in Minn. R. 7011.1284, subp. 3, the content of examinations, and the results of an individual's examination. [Minn. R. 7011.1284, subp. 3, Minn. R. 7011.1284, subp. 3a, Minn. R. 7011.1284, subp. 4]
5.5.51	The Permittee shall maintain a record of personnel who complete either the Environmental Protection Agency municipal waste combustor operator training course, or an equivalent course. The record shall include documentation of training completion. [Minn. R. 7011.1280, subp. 11]
5.5.52	The maximum demonstrated load of a municipal waste combustion unit means the highest 4-hour block arithmetic average municipal waste combustion unit load achieved during 4 consecutive hours in the course of the most recent dioxins/furans stack test that demonstrates compliance with the applicable emission limit for dioxins/furans specified in 40 CFR pt. 60, subp. AAAA. Maximum demonstrated temperature of the particulate matter control device means the highest 4-hour block arithmetic average flue gas temperature measured at the inlet of the particulate matter control device during 4 consecutive hours in the course of the most recent stack test for dioxins/furans emissions that demonstrates compliance with the limits specified in 40 CFR pt. 60, subp. AAAA. [40 CFR 60.1465, Minn. R. 7011.1293]
5.5.53	Operation during performance testing. The Permittee must report operating conditions to the commissioner, including operating parameters of the air pollution control equipment, flue gas temperatures, air flow rates, and pressure drop across the combustion system. [Minn. R. 7011.1265, subp. 6]
5.5.54	The Permittee must install, calibrate, maintain, and operate a device to continuously measure the temperature of the flue gas stream at the inlet of each particulate matter control device. [40 CFR 60.1325, Minn. R. 7011.1293]
5.5.55	Exceeding emission limits. If accurate and valid data results of a performance test demonstrate an exceedance of a standard of performance under Minn. R. 7011.1225 or in the waste combustor's air emission facility permit after normal start-up, the Permittee must take the actions in items A to D: A. The Permittee must report to the commissioner as soon as reasonably possible with consideration to plant and worker safety and comply with the applicable reporting provisions of Minn. R. 7007.0800, subpart 6. B. The Permittee must take appropriate steps to return the waste combustor to compliance including additional performance test(s) and must demonstrate compliance within 60 days of the initial report of the exceedance. C. If the commissioner determines that compliance has not been achieved within 60 days of the initial report of exceedance, the waste combustor must be shut down on the 61st day after reporting the exceedance. D. If shutdown was required under item C, the waste combustor may be restarted under the conditions specified by the commissioner. The Permittee must notify the commissioner in writing of

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	the date on which the Permittee plans to start up and to begin compliance testing. Notification must be at least ten days in advance of the compliance test date. The permittee may restart the waste combustor for the purposes of compliance testing, provided that notification has been provided to the Commissioner. The Permittee is allowed to operate the waste combustor until the completion of the test, after which the waste combustor must be shut down. The waste combustor may be restarted only after the Permittee receives notice from the commissioner compliance has been achieved with the emissions standards or restarts for the purpose and duration of additional testing after further repair or operational changes. [Minn. R. 7007.0800, subp. 2(B), Minn. R. 7011.1265, subp. 11, Minn. Stat. 116.85, subd. 3]
5.5.56	Continuous Monitoring: The Permittee must install, calibrate, maintain, and operate continuous emission monitoring systems for oxygen (or carbon dioxide), sulfur dioxide, and carbon monoxide at the outlet of the air pollution control device. The Permittee must install, evaluate, and operate each continuous emission monitoring system according to the "Monitoring Requirements" in 40 CFR 60.13, subp. A. The Permittee must monitor the oxygen (or carbon dioxide) concentration at each location where sulfur dioxide and carbon monoxide are monitored. The Permittee may choose to monitor carbon dioxide instead of oxygen as a diluent gas. If the Permittee chooses to monitor carbon dioxide, then an oxygen monitor is not required and the Permittee must follow the requirements in 40 CFR 60.1255. If the Permittee chooses to demonstrate compliance by monitoring the percent reduction of sulfur dioxide, the Permittee must also install a continuous emission monitoring system for sulfur dioxide and oxygen (or carbon dioxide) at the inlet of the air pollution control device. If the Permittee prefers to use an alternative sulfur dioxide monitoring method, such as parametric monitoring, or cannot monitor emissions at the inlet of the air pollution control device to determine percent reduction, the Permittee can apply to the Administrator for approval to use an alternative monitoring method under 40 CFR 60.13(i). [40 CFR 60.1225, 40 CFR 60.1230, Minn. R. 7011.1293]
5.5.57	The Permittee must install, calibrate, maintain, and operate a continuous monitoring system when burning solid waste. Monitoring systems that continuously read and record sulfur dioxide must be installed. For those facilities for which compliance is determined by the percent reduction of emissions, monitors must be installed at the inlets and outlets of the air pollution control system. [Minn. R. 7011.1260, subp. 3(C)]
5.5.58	The Permittee must install, calibrate, maintain, and operate temperature monitors that continuously read and record the temperatures of the flue gas at the inlet of each particulate matter control device. [Minn. R. 7011.1260, subp. 2]
5.5.59	The Permittee must also install, calibrate, maintain, and operate continuous monitor systems that read, record, and obtain representative measures of the process parameters from the affected facility for the following three operating parameters: (a) Load level of each municipal waste combustion unit. (b) Temperature of flue gases at the inlet of the particulate matter air pollution control devices. (c) Carbon/control additive feed rate used to control dioxins/furans or mercury emissions. [40 CFR 60.13(f), 40 CFR 60.1315, Minn. R. 7011.1293, Minn. R. 7017.1010, subp. 1(A)]
5.5.60	Continuous Opacity Monitoring. The Permittee must:

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	-Install, calibrate, maintain, and operate a continuous opacity monitoring system. -Install, evaluate, and operate each continuous opacity monitoring system according to 40 CFR 60.13. -Complete each annual evaluation of the continuous opacity monitoring system according to Performance Specification 1 in 40 CFR pt. 60, appendix B, no more than 13 months after the previous evaluation. -Use tests conducted according to EPA Reference Method 9 in 40 CFR pt. 60, appendix A, as specified in 40 CFR 60.1300, to determine compliance with the opacity limit in 40 CFR pt. 60, subp. AAAA, Table 1. The data obtained from the continuous opacity monitoring system are not used to determine compliance with the opacity limit. [40 CFR 60.1225, 40 CFR 60.1270, Minn. R. 7011.1293]
5.5.61	The Permittee must install, calibrate, maintain, and operate a device to continuously measure the temperature of the flue gas stream at the inlet of each particulate matter control device. [40 CFR 60.1325, Minn. R. 7011.1293]
5.5.62	Continuous Monitoring: The Permittee must: - Continuously monitor the selected mercury/PCDD/PCDF control additive (additive) feed rate operating parameter during all periods when the municipal waste combustion unit is operating and combusting waste. - Calculate the 8-hour block average additive feed rate in kilograms (or pounds) per hour. 8-hour block average means the average of all hourly emission concentrations or parameter levels when the municipal waste combustion unit operates and combusts municipal solid waste measured over any of three 8-hour periods of time:12:00 midnight to 8:00 a.m.; 8:00 a.m. to 4:00 p.m.; and 4:00 p.m. to 12:00 midnight. - When calculating the 8-hour block average, exclude hours when the unit is not operating and include hours when unit is operating but the additive feed system is not working correctly. [40 CFR 60.1330(c), 40 CFR 60.1465, Minn. R. 7011.1293]
5.5.63	Continuous Monitoring: The Permittee must obtain one-hour arithmetic averages from four or more data points equally spaced over each 1-hour period for: - Load level of the municipal waste combustion unit. - Temperature of the flue gases at the inlet of the particulate matter control device. - Mercury/PCDD/PCDF control additive feed rate. Data recorded during periods of continuous system breakdown, repair, calibration checks, and zero and span adjustments must not be included in the data averages computed, unless there are, at least, two data points per hour. The Permittee must obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. The Permittee must obtain valid 1-hour averages for at least 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste. If the Permittee does not obtain the minimum data required, the Permittee is in violation of this data collection requirement and must notify the Administrator according to 40 CFR 60.1410(e). [40 CFR 60.13(e)(2), 40 CFR 60.13(h)(2), 40 CFR 60.1335, Minn. R. 7011.1293]

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5.5.64	The Permittee must operate continuous monitors to measure and record data for at least 75 percent of the hours per day for 90 percent of the days of the calendar quarter that the waste combustor is operating and combusting solid waste. [Minn. R. 7011.1260, subp. 5(B)]
5.5.65	Continuous Monitoring: All continuous monitoring systems and monitoring devices required under 40 CFR pt. 60, including CEMS and COMS, shall be installed, operational, and certified prior to conducting performance tests under 40 CFR 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b), Minn. R. 7017.1010, subp. 1(A)]
5.5.66	Continuous Operation: Except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, all continuous monitoring systems (including CEMS and COMS) shall be in continuous operation during all periods of emission unit operation. This includes periods of emission unit start-up, shutdown, or malfunction. [40 CFR 60.13(e), Minn. R. 7017.1010, subp. 1(A), Minn. R. 7017.1090, subp. 1]
5.5.67	The Permittee must install, calibrate, maintain, and operate a steam flowmeter or a feed water flowmeter that continuously measures and records the measurements of steam (or feed water) in kilograms (or pounds) per hour. The Permittee must calculate the steam (or feed water) flow in 4-hour block averages. The Permittee must calculate the steam (or feed water) flow rate using the method in "American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1-1964 (R1991)," section 4 (incorporated by reference in 40 CFR 60.17(g)(13)). The Permittee must design, construct, install, calibrate, and use nozzles or orifices for flow rate measurements, using the recommendations in "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, part II of Fluid Meters," 6th Edition (1971), chapter 4 (incorporated by reference in 40 CFR 60.17(g)(1)). Before each dioxins/furans stack test, or at least once a year, the Permittee must calibrate all signal conversion elements associated with steam (or feed water) flow measurements according to the manufacturer instructions. [40 CFR 60.1315(a), 40 CFR 60.1320(a), Minn. R. 7011.1293]
5.5.68	The method contained in ASME PTC 4.1, section 4, incorporated by reference in Minn. R. 7011.1205, must be used for calculating the steam flow (of feed water) required under Minn. R. 7011.1260, subp.3, item A, subitem (2). The recommendations of Application: Part II of Fluid Meters, Interim Supplement 19.5 on Instruments and Apparatus, chapter 4, incorporated by reference in Minn. R. 7011.1205, must be followed for design, construction, installation, calibration, and use of nozzles and orifices, except that measurement devices such as flow nozzles and orifices are not required to be recalibrated after they are installed. All signal conversion elements associated with steam flow (or feed water) measurements must be calibrated according to the manufacturer's instructions before each PCDD/PCDF test, and at least once per year. This annual calibration shall be recorded in the daily operating record as described in Minn. R. 7011.1285, subp. 2. [Minn. R. 7011.1265, subp. 4]
5.5.69	If the municipal waste combustion unit does not generate steam, or, if municipal waste combustion units have shared steam systems and steam load cannot be estimated per unit, The Permittee must determine, to the satisfaction of the Administrator, one or more operating parameters that can be used to continuously estimate load level (for example, the feed rate of municipal solid waste). The Permittee must continuously monitor the selected parameters. [40 CFR 60.1315(a), 40 CFR 60.1320(b), Minn. R. 7011.1293]
5.5.70	Alternative continuous measuring methods in place of steam flow may be installed and operated, provided that the method continuously measures the waste combustor unit load, is equivalent to

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	results obtained when using the method in Minn. R. 7011.1265, subp. 4, and the use of the method is approved by the commissioner prior to installation. [Minn. R. 7011.1265, subp. 4a]
5.5.71	To convert 1-hour arithmetic averages into the appropriate averaging times and units, the Permittee must: - Use the equation in 40 CFR 60.1460(a) (listed below) to calculate emissions at 7 percent oxygen. Concentration correction to 7 percent oxygen. Correct any pollutant concentration to 7 percent oxygen using this equation: C7% = Cunc * (13.9) * (1/(20.9-CO2)) Where: C7% = concentration corrected to 7 percent oxygen. Cunc = uncorrected pollutant concentration. CO2 = concentration of oxygen (percent). - Use EPA Reference Method 19 in appendix A of 40 CFR pt. 60, section 4.3, to calculate the daily geometric average concentrations of sulfur dioxide emissions. If monitoring the percent reduction of sulfur dioxide, use EPA Reference Method 19 in appendix A of 40 CFR pt. 60, section 5.4, to determine the daily geometric average percent reduction of potential sulfur dioxide emissions. - Use EPA Reference Method 19 in appendix A of 40 CFR pt. 60, section 4.1, to calculate the 4-hour or 24-hour daily block averages (as applicable) for concentrations of carbon monoxide. If the Permittee does not obtain the minimum data required in 40 CFR 60.1260(a) through (c), the Permittee must still use all valid data from the continuous emission monitoring systems in calculating emission concentrations and percent reductions in accordance with 40 CFR 60.1265. [40 CFR 60.1260(e), 40 CFR 60.1265, Minn. R. 7011.1293]
5.5.72	The Permittee must obtain 1-hour arithmetic averages for continuous emission monitoring systems. The Permittee must make sure the averages for sulfur dioxide and carbon monoxide are in parts per million by dry volume at 7 percent oxygen (or the equivalent carbon dioxide level) and use the 1-hour averages of oxygen (or carbon dioxide) data from the continuous emission monitoring system to determine the actual oxygen (or carbon dioxide) level and to calculate emissions at 7 percent oxygen (or the equivalent carbon dioxide level). The Permittee must obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. 40 CFR 60.13(e)(2) requires the continuous emission monitoring systems to complete at least one cycle of operation (sampling, analyzing, and data recording) for each 15-minute period. The Permittee must obtain valid 1-hour averages for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel. [40 CFR 60.1260(a)-(c), Minn. R. 7011.1293]
5.5.73	The Permittee must use all valid data from the continuous emission monitoring systems in calculating emission concentrations and percent reductions. When continuous emissions data for sulfur dioxide removal efficiency, sulfur dioxide, or carbon monoxide are not obtained because of monitor breakdowns, repairs, calibration checks, and zero and span adjustments, emission data calculations to determine compliance must be made using the following methods: (1) for sulfur dioxide removal efficiency or sulfur dioxide emission concentrations, 40 CFR pt. 60, Appendix A, Method 19, as amended, to provide valid emission data to meet the requirements of Minn. R. 7011.1260, subp. 5(B). Other monitoring systems or other data collection methods may be used as approved by the commissioner; and

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	(2) for carbon monoxide, 40 CFR pt. 60, Appendix A, Method 10, as amended, to provide valid emission data to meet the requirements of Minn. R. 7011.1260, subp. 5(B). Other monitoring systems or other data collection methods may be used as approved by the commissioner. [Minn. R. 7011.1260, subp. 5(C)-(D)]
5.5.74	The Permittee must notify the Administrator according to 40 CFR 60.1410(e) if the minimum data required for continuously monitored emissions and parameters are not obtained. [40 CFR 60.1260(d), 40 CFR 60.1335(d), Minn. R. 7011.1293]
5.5.75	Exceeding continuously monitored emission limits. If accurate and valid data results collected from continuous monitors for sulfur dioxide or carbon monoxide data exceed emission limits established in Minn. R. 7011.1225 or this permit after normal start-up, the Permittee must take the following actions: A. The exceedance must be reported to the commissioner as soon as reasonably possible, giving consideration to matters of plant or worker safety or access to communications. B. Appropriate repairs or modifications to return the waste combustor to compliance must be commenced within 72 hours of the exceedance. C. If the waste combustor cannot be returned to compliance within 72 hours of the exceedance occurring, the waste combustor must be shut down. If the modifications to return the waste combustor to compliance require amending the air emission facility permit, the waste combustor must shut down within 72 hours of the exceedance. D. When repairs or modifications have been completed, the Permittee must demonstrate to the commissioner that the waste combustor is in compliance. The waste combustor may be started up after the Permittee notifies the commissioner in writing of the date the Permittee plans to start up the waste combustor and the date that compliance testing is scheduled. Notification must be given at least ten days in advance of the compliance test date. [Minn. R. 7011.1260, subp. 7]
5.5.76	Recording data from continuous monitoring. The Permittee must maintain a permanent record of continuously measured parameters. The record of monitoring must contain: A. the calendar date; B. the following measurements recorded in a manner that allows the data to be immediately accessed upon inspection by the commissioner: (1) all six-minute opacity readings; (2) all one-hour average sulfur dioxide emission concentrations at the inlet and outlet of the acid gas control device if compliance is based on a percent reduction, or at the outlet only if compliance is based on the outlet emission limit; and (3) all one-hour average carbon monoxide emission concentrations, steam flow or alternative unit load measurement parameter as described in Minn. R. 7011.1265, subp. 4a, combustion chamber temperature, and particulate matter control device temperatures; and C. the following average concentrations and parameters: - all 24-hour daily geometric average percent reductions in sulfur dioxide emissions or all 24-hour daily geometric average sulfur dioxide emission concentrations, as applicable; - all four-hour block or 24-hour daily arithmetic average carbon monoxide emission concentrations, as applicable; and - all four-hour block arithmetic average unit load levels and particulate matter control device inlet temperatures. [Minn. R. 7011.1260, subp. 6]
5.5.77	Continuous monitoring records. The Permittee must keep records of: Records of monitoring data. The Permittee must document the following parameters measured using continuous monitoring systems: -All 6-minute average levels of opacity.

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	-All 1-hour average concentrations of sulfur dioxide emissions. -All 1-hour average concentrations of carbon monoxide emissions. -All 1-hour average load levels of EQUI 35. -All 1-hour average flue gas temperatures at the inlet of the particulate matter control device. Records of average concentrations and percent reductions. The Permittee must document the following parameters: -All 24-hour daily block geometric average concentrations of sulfur dioxide emissions or average percent reductions of sulfur dioxide emissions. -All 4-hour block or 24-hour daily block arithmetic average concentrations of carbon monoxide emissions. -All 4-hour block arithmetic average load levels of EQUI 35. -All 4-hour block arithmetic average flue gas temperatures at the inlet of the particulate matter control device. Records of exceedances. The Permittee must document three items: -Calendar dates whenever any of the pollutant or parameter levels recorded or the opacity level recorded did not meet the emission limits or operating levels specified in this permit. -Reasons the applicable emission limits or operating levels were exceeded. -Corrective actions taken to meet the emission limits or operating levels. Records of minimum data. The Permittee must document three items: -Calendar dates for which the minimum amount of data required was not collected under 40 CFR 60.1260 and 60.1335. Record the dates for sulfur dioxide emissions, carbon monoxide emissions, load levels of EQUI 35, and temperatures of the flue gases at the inlet of the particulate matter control device. -Reasons the minimum data was not collected. -Corrective actions taken to obtain the required amount of data. Records of exclusions. The Permittee must document each time data was excluded from the calculation of averages and the reasons the data were excluded for sulfur dioxide emissions, carbon monoxide emissions, load levels of EQUI 35, and temperatures of the flue gases at the inlet of the particulate matter control device. Records of drift and accuracy. The Permittee must document the results of the daily drift tests and quarterly accuracy determinations according to Procedure 1 of appendix F of 40 CFR pt. 60. Keep the records for the sulfur dioxide and carbon monoxide continuous emissions monitoring systems. Records of the relationship between oxygen and carbon dioxide. If the Permittee chooses to monitor carbon dioxide instead of oxygen as a diluent gas, document the relationship between oxygen and carbon dioxide, as specified in 40 CFR 60.1255. Records of calendar dates. Include the calendar date on each record. [40 CFR 60.1365, Minn. R. 7011.1293]
5.5.78	The Permittee must keep all records onsite in paper copy or electronic format unless the Administrator or commissioner approves another format. The Permittee must keep all records on each municipal waste combustion unit for at least 5 years. The Permittee must make all records available for submittal to the Administrator or commissioner, or for onsite review by an inspector. [40 CFR 60.1345, Minn. R. 7011.1293]
5.5.79	The Permittee shall maintain records and submit reports as required in Minn. R. 7011.1285. The

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	Permittee is subject to the record-keeping and reporting requirements in Minn. R. 7007.0800, subps. 5 and 6 and shall maintain on site all submittals required by Minn. R. 7011.1285 as paper copies for five years. [Minn. R. 7011.1285, subp. 1]
5.5.80	Daily Operating Record. The Permittee shall maintain a daily record of the operation of the waste combustor. The record shall contain: A. the calendar date; B. the hours of operation; C. the weight of waste combusted; D. the weight of waste requiring disposal at a solid waste land disposal facility, including separated noncombustibles, excess waste, and ash; E. the amount and description of industrial solid waste received each day, the generator's name, and the method of handling; F. the measurements and determination of emissions averages as required in Minn. R. 7011.1260, subp. 6; G. results of performance tests conducted on EQUI 35 as required in Minn. R. 7011.1270 and 40 CFR pt. 60, subp. AAAA; H. instances of dumpstack use, specifically addressing the length of time the dumpstack was used, the operating conditions of the waste combustor during dumpstack used, and the reason for using the dumpstack; I. the names of persons who have completed initial review or subsequent annual review of the operating manual; J. the reasons for exceeding any of the average emission rates, percent reductions, or operating parameters specified under Minn. R. 7011.1260, subp. 6, item C, or the opacity limit and a description of corrective actions taken; J1. Continuous monitoring system records including each one-hour emission average recorded by the CEMS, each six-minute opacity average recorded by the COMS, monitor certification test reports, excess emissions reports, cylinder gas audit reports, calibration error audit reports, relative accuracy test audits, linearity check reports, results of daily calibration drift checks, and records of adjustments made and maintenance performed on the CEMS or COMS; K. reasons for not obtaining the minimum number of hours of sulfur dioxide emissions or operational data (opacity, carbon monoxide emissions, steam flow or alternative unit load measurement parameter as described in Minn. R. 7011.1265, subp. 4a, particulate matter control device temperature) and a description of corrective actions taken. L. the date of the calibration of all signal conversion elements associated with steam flow monitoring as required in Minn. R. 7011.1265, subp. 4; M. for waste combustors using an additive to comply with mercury or PCDD/PCDF emission limits, reasons for not maintaining the additive system operating parameter as determined in Minn. R. 7011.1272, subp. 2, and descriptions of corrective actions taken; M1. a record of the average additive system operating parameter for each hour of operation. M2. if the required hourly average additive system operating parameter is not maintained, the reasons for not maintaining the additive system operating parameter as determined in Minn. R. 7011.1272, subp. 2 and the corrective actions taken. M3. a record of the average additive mass feed rate for each hour of operation. N. for waste combustors using an additive to comply with mercury or PCDD/PCDF emission limits, reasons for not maintaining the additive mass feed rates as determined in Minn. R. 7011.1272, subp. 1, and descriptions of corrective actions taken; O. a record of the pressure drop across the fabric filters; and P. a record of acid gas control. [Minn. R. 7007.0800, subp. 5, Minn. R. 7011.1285]
5.5.81	Recordkeeping: maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is

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	inoperative. [Minn. R. 7007.0800, subp. 4-5]
5.5.82	Recordkeeping and Recording of Mercury/PCDD/PCDF Control Additive Use. The Permittee must maintain records on site in a form suitable for immediate inspection of: - Average carbon feed rate in kilograms (or pounds) per hour during all stack tests for dioxins/furans and mercury emissions. Include supporting calculations in the records. - For the operating parameter chosen to monitor carbon feed rate, average operating level during all stack tests for dioxins/furans and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate. - All 8-hour block average mercury/PCDD/PCDF control additive feed rates in kilograms (pounds) per hour calculated from the monitored operating parameter. - Total mercury/PCDD/PCDF control additive purchased and delivered to the plant for each calendar quarter. If the Permittee chooses to evaluate total control additive purchased and delivered on a municipal waste combustion unit basis, record the total control additive purchased and delivered for each individual municipal waste combustion unit at the plant. Include supporting documentation. - Required quarterly usage of mercury/PCDD/PCDF control additive for the municipal waste combustion plant, calculated using equation 4 or 5 of 40 CFR 60.1460(f) (listed below). If the Permittee chooses to evaluate required quarterly usage for control additive on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit at the plant. Include supporting calculations. Equation 4, plant basis: C = SUMn(fi * hi) Where: C = required quarterly carbon usage for the plant in kilograms (or pounds). fi = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. This is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate). hi = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours). n = number of municipal waste combustion units, i, located at the plant. Equation 5, unit basis: C = f * h Where: C = required quarterly carbon usage for the unit in kilograms (or pounds). f = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. This is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate). h = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours).

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	- Quarterly total additive (PAC) bag usage consisting of number of bags, weight of each bag, weekly verification of weight, and monthly zero of scales. [40 CFR 60.1370(a), Minn. R. 7007.0800, subp. 4-5, Minn. R. 7011.1293]
5.5.83	The Permittee shall maintain a record of the average additive mass feed rate for each hour of operation (in kilograms or pounds per hour) during all stack tests for dioxin/furans (PCDD/PCDF) and mercury emissions, as measured by the operating parameter required in Minn. R. 7011.1272, subp. 2. If the operating parameter is not a direct measurement of the mass feed rate of the additive, then the record shall contain the calculations supporting the correlation between the mass feed rate and the measured operating parameter. The record shall be maintained on site in a form suitable for immediate inspection. [Minn. R. 7011.1272, subp. 3(A)]
5.5.84	Recordkeeping, Records of low mercury/PCDD/PCDF control additive feed rates. The Permittee must keep the following records: - The calendar dates and times when the average mercury/PCDD/PCDF control additive feed rate over an 8-hour block was less than the average mercury/PCDD/PCDF control additive feed rates determined during the most recent mercury or PCDD/PCDF stack test (whichever has a higher feed rate). - Reasons for the low mercury/PCDD/PCDF control additive feed rates. - Corrective actions taken to meet the 8-hour average mercury/PCDD/PCDF control additive feed rate requirement. The Permittee must record each time data was excluded from calculation of average mercury/PCDD/PCDF control additive feed rates and the reasons the data were excluded. [40 CFR 60.1370(b) and (d), Minn. R. 7011.1293]
5.5.85	The Permittee must submit annual reports, plus semiannual reports for any emission or parameter level that does not meet the limits in 40 CFR pt. 60, subp. AAAA. The Permittee must submit all reports on paper, postmarked on or before the submittal dates in 40 CFR 60.1395, 60.1405, and 60.1420. If the Administrator agrees, the Permittee may submit electronic reports. The Permittee must keep a copy of all reports required by 40 CFR 60.1400, 60.1410, and 60.1425 onsite for 5 years. [40 CFR 60.1385, Minn. R. 7011.1293]
5.5.86	The Permittee must submit a semiannual report on any recorded emission or parameter level that does not meet the requirements specified in 40 CFR pt. 60, subp. AAAA. If required, the Permittee must submit a semiannual report for data collected during the first half of a calendar year, by August 1 of that year. For data collected during the second half of the calendar year, the Permittee must submit the semiannual report by February 1 of the following year. [40 CFR 60.1415, 40 CFR 60.1420, Minn. R. 7011.1293]
5.5.87	The Permittee must include the following in the semiannual out-of-compliance reports: (a) For concentration or percent reduction of sulfur dioxide emissions, concentration of carbon monoxide emissions, load level of the municipal waste combustion unit, temperature of the flue gases at the inlet of the particulate matter air pollution control device and/or average 6-minute opacity level (the data obtained from the continuous opacity monitoring system are not used to determine compliance with the limit on opacity emissions) that exceeded the limits specified in this permit, include the calendar date they exceeded the limits, the averaged and recorded data for that date, the reasons for exceeding the limits, and corrective actions.

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	(b) If the results of the annual stack tests show emissions above the limits specified in this permit for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash, include a copy of the test report that documents the emission levels and corrective actions. (c) For municipal waste combustion units that apply activated carbon/control additive to control dioxins/furans or mercury emissions, include two items: (1) Documentation of all dates when the 8-hour block average carbon/control additive feed rate (calculated from the carbon injection system operating parameter) is less than the highest feed rate established during the most recent mercury and dioxins/furans stack test (as specified in 40 CFR 60.1370(a)(1)). Include four items: (i) Eight-hour average carbon/control additive feed rate. (ii) Reasons for these occurrences of low carbon/control additive feed rates. (iii) The corrective actions taken to meet the carbon/control additive feed rate requirement. (iv) The calendar date. (2) Documentation of each quarter when total carbon purchased and delivered to the municipal waste combustion plant is less than the total required quarterly usage of carbon. If total carbon purchased and delivered is evaluated on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at the plant. Include five items: (i) Amount of carbon purchased and delivered to the plant. (ii) Required quarterly usage of carbon. (iii) Reasons for not meeting the required quarterly usage of carbon. (iv) The corrective actions taken to meet the required quarterly usage of carbon. (v) The calendar date. [40 CFR 60.1425, Minn. R. 7011.1293]
5.5.88	Record keeping and recording of additive use. The Permittee shall maintain a record of the average additive mass feed rate for each hour of operation, as measured by the operating parameter required in Minn. R. 7011.1272, subp. 2. If the operating parameter is not a direct measurement of the mass feed rate of the additive, then the record shall contain the calculations supporting the correlation between the mass feed rate and the measured operating parameter. The record shall be maintained on site in a form suitable for immediate inspection. During each calendar quarter, the Permittee shall estimate the total additive used at the waste combustor in pounds or kilograms by two independent means: (1) the weight of additive delivered to the plant; and (2) estimate the average additive mass feed rate in pounds per hour, or kilograms per hour, for each hour of operation for each unit, based on the parameters measured in Minn. R. 7011.1272, subp. 2. Sum the results of the mass feed rates for all waste combustor units at the plant for the total number of hours of operation during the calendar quarter. [Minn. R. 7011.1272, subp. 3]
5.5.89	The Permittee shall maintain paper copies of each quarterly report, annual report, initial compliance report, and performance test report as required under Minn. R. 7011.1285, subp. 3, 4, 5, and 6 respectively, on-site for five years. [Minn. R. 7011.1285, subp. 1]
EQUI 36	**North MSW Incinerator**
5.6.1	The 40 CFR pt. 60 subp. A general provisions and appendices apply to 40 CFR pt. 62, except as follows: 40 CFR 60.7(a)(1), 60.7(a)(3), and 60.8(a) and where special provisions set forth under the applicable subpart of 40 CFR pt. 62 shall apply instead of any conflicting provisions. [40 CFR 62.02(b)(2)]
5.6.2	Applicability of Standards. The standards of Minn. R. 7011.1227, Minn. R. 7011.1240, subp. 2, and Minn. R. 7011.1272, subp. 2, apply at all times when waste is being continuously burned, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up,

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	shutdown, or malfunction does not exceed three hours. Fugitive emissions standards applicable to ash conveying systems do not apply during maintenance and repair of ash conveying systems. "Malfunction" means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown are not considered malfunctions. The start-up period commences when the waste combustor begins the continuous burning of solid waste and does not include any warm-up period when the waste combustor is combusting fossil fuel or other solid fuel. Continuous burning is the continuous, semicontinuous, or batch feeding of solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of solid waste solely to provide thermal protection of the grate or hearth during the start-up period when municipal solid waste is not being fed to the grate is not considered to be continuous burning. [Minn. R. 7011.1215, subp. 4]
5.6.3	The emission limits and operating requirements of 40 CFR pt. 62, subp. JJJ apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction. Each startup, shutdown, or malfunction must not last for longer than 3 hours. A maximum of 3 hours of test data can be dismissed from compliance calculations during periods of startup, shutdown, or malfunction. During startup, shutdown, or malfunction periods longer than 3 hours, emissions data cannot be discarded from compliance calculations and all provisions under 40 CFR 60.11(d) of 40 CFR pt. 60, subp. A apply. [40 CFR 62.15150, 40 CFR 62.15165, Minn. R. 7011.1295]
5.6.4	The Permittee must not cause gases to be emitted from EQUI 36 in excess of the applicable standards of Minn. R. 7011.1227. Emissions, except opacity, must be calculated under standard conditions corrected to seven percent oxygen on a dry volume basis. The Permittee may determine compliance with the emission limitations using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. [Minn. R. 7011.1225, subp. 1(A)]
5.6.5	The Permittee must limit Particulate Matter <= 70 milligrams per dscm, 3-run average (run duration specified in test method) measured at 7% oxygen. [40 CFR 62.15155(b)(5), 40 CFR 62.15160(a)(2), Minn. R. 7011.1295]
5.6.6	The Permittee must limit Particulate Matter <= 0.020 grains per dry standard cubic foot. This limit is applied in accordance with the "Applicability of Standards" stated in this permit above. [Minn. R. 7011.1227]
5.6.7	The Permittee must limit Muni Waste Combust Organics <= 500 nanograms per dscm, measured as total PCDD/PCDF. The Permittee must use 40 CFR pt. 60, Appendix A, Method 23, as amended, to determine compliance with the PCDD/PCDF emission limits. The minimum sample time is four hours per test run. An oxygen or carbon dioxide measurement must be obtained simultaneously with each Method 23 test run for PCDD/PCDF. The average of the PCDD/PCDF test runs is used to determine compliance. [Minn. R. 7011.1227, Minn. R. 7011.1265, subp. 3(B)]
5.6.8	The Permittee must limit Muni Waste Combust Organics <= 125 nanograms per dscm measured as Dioxins/furans (total mass basis), 3-run average (minimum run duration is 4 hours) measured at 7% oxygen. [40 CFR 62.15155(a), 40 CFR 62.15160(a)(2), Minn. R. 7011.1295]
5.6.9	The Permittee must limit Muni Waste Combust Organics <= 20.0 nanograms per dscm. This limit is applied in accordance with the "Applicability of Standards" stated in this permit. The Permittee must follow the requirements specified in Minn. R. 7011.1265 and 40 CFR 62.1300 regarding sampling methods, sampling time, sample volume, and other testing requirements. [Minn. R. 7007.0800, subp.

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	2(A)]
5.6.10	The Permittee must limit Cadmium <= 0.10 milligrams per dscm 3-run average (run duration specified in test method) measured at 7% oxygen. [40 CFR 62.15155(b)(1), 40 CFR 62.15160(a)(2), Minn. R. 7011.1295]
5.6.11	The Permittee must limit Lead <= 1.6 milligrams per dscm, 3-run average (run duration specified in test method) measured at 7% oxygen. [40 CFR 62.15155(b)(2), 40 CFR 62.15160(a)(2), Minn. R. 7011.1295]
5.6.12	The Permittee must limit Mercury <= 100 micrograms per dscm (short term) or 85% removal. [Minn. R. 7011.1227]
5.6.13	The Permittee must limit Mercury <= 60 micrograms per dscm (long term) or 85% removal. [Minn. R. 7011.1227]
5.6.14	The Permittee must limit Mercury <= 0.080 milligrams per dscm or 85% reduction of potential mercury emissions, 3-run average (run duration specified in test method), measured at 7% oxygen. [40 CFR 62.15155(b)(3), 40 CFR 62.15160(a)(2), Minn. R. 7011.1295]
5.6.15	The Permittee must limit Mercury <= 41.0 micrograms per dscm. This limit is applied in accordance with Minn. R. 7011.1227, 7011.1240, subps. 2 and 5 and 7011.1272, subp. 2. The Permittee must follow the requirements specified in 40 CFR 62.15245 regarding sampling methods and other testing requirements and Minn. R. 7011.1265, subpart 3(C) and Minn. R. 7011.1265, subpart 3(D). [Minn. R. 7007.0800, subp. 2(A)]
5.6.16	The Permittee must limit Opacity <= 10 percent opacity 6-minute average, calculated using 36 or more data points equally spaced over a six-minute period. [40 CFR 62.15155(b)(4), 40 CFR 62.15160(a)(2), Minn. R. 7011.1227, Minn. R. 7011.1260, subp. 4(F), Minn. R. 7011.1295]
5.6.17	The Permittee must limit Carbon Monoxide <= 100 parts per million 4-hour block average, arithmetic mean, measured at 7% oxygen. Compliance is determined by continuous emission monitoring systems. [40 CFR 62.15155(d)(1), 40 CFR 62.15160(a)(3), 40 CFR 62.15180, Minn. R. 7011.1227, Minn. R. 7011.1295]
5.6.18	The Permittee must limit Hydrogen Chloride <= 250 parts per million by volume or 50% reduction of potential hydrogen chloride emissions, 3-run average (minimum run duration is 1 hour), measured at 7% oxygen. [40 CFR 62.15155(c)(1), 40 CFR 62.15160(a)(2), Minn. R. 7011.1295]
5.6.19	The Permittee must limit Nitrogen Oxides <= 500 parts per million by dry volume, measured at 7% oxygen. No monitoring, testing, recordkeeping, or reporting is required to demonstrate compliance. [40 CFR 62.15155(c)(2), 40 CFR 62.15160(a)(2), Minn. R. 7011.1295]
5.6.20	The Permittee must limit Sulfur Dioxide <= 77 parts per million 24-hour block average geometric concentration by dry volume, measured at 7% oxygen or 50% reduction of potential sulfur dioxides emissions. Determine compliance by emission monitoring system. [40 CFR 62.15155(c)(3), 40 CFR 62.15160(a)(2), 40 CFR 62.15180, Minn. R. 7011.1295]
5.6.21	The Permittee must limit fugitive combustion ash Visible Emissions <= 5 percent of the observation period (i.e. 9 minutes per three-hour period), from an ash conveying system, or buildings or enclosures of ash conveying systems, including conveyor transfer points, as determined by 40 CFR pt. 60, Appendix A, Method 22, as amended. This limit does not apply to visible emissions discharged inside buildings or enclosures of ash conveying systems. [40 CFR 62.15155(d)(2), 40 CFR 62.15160(a)(2), Minn. R. 7011.1225, subp. 1(B), Minn. R. 7011.1295]
5.6.22	The Permittee must limit Steam Flow <= 27,066 pounds per hour 4-hour block average. This is 110% of the steam production during the most recent EQUI 36 test (April 29-30, 2026) that demonstrated compliance for PCDD/PCDF emissions. Steam production shall not exceed 27,066 pounds per hour until a new test is conducted to establish a new maximum steam production capacity or as allowed by Minn. R. 7011.1240, subp. 5. [40 CFR 62.15145(a), Minn. R. 7011.1240, subp. 5, Minn. R. 7011.1265, subp. 7, Minn. R. 7011.1295, Minn. R. 7017.2025, subp. 3]
5.6.23	The Permittee must vent emissions from EQUI 36 to control equipment meeting the requirements of

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	TREAs 1, 2, and 3 whenever EQUI 36 operates. [Minn. R. 7007.0800, subp. 16(J)]
5.6.24	After the required date for full or provisional certification, the Permittee must not operate the municipal waste combustion unit unless one of four employees is on duty: (a) A fully certified chief facility operator. (b) A provisionally certified chief facility operator who is scheduled to take the full certification exam. (c) A fully certified shift supervisor. (d) A provisionally certified shift supervisor who is scheduled to take the full certification exam. If the certified chief facility operator and certified shift supervisor both are unavailable, a provisionally certified control room operator at the municipal waste combustion unit may fulfill the certified operator requirement. Depending on the length of time that a certified chief facility operator and certified shift supervisor is away, you must meet one of three criteria: (a) When the certified chief facility operator and certified shift supervisor are both offsite for 12 hours or less and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. (b) When the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, you must record the periods when the certified chief facility operator and certified shift supervisor are offsite and include this information in the annual report as specified under 40 CFR 62.15340(l). (c) When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, you must take two actions: (1) Notify the Administrator in writing. In the notice, state what caused the absence and what you are doing to ensure that a certified chief facility operator or certified shift supervisor is onsite. (2) Submit a status report and corrective action summary to the Administrator every 4 weeks following the initial notification. If the Administrator notifies you that your status report or corrective action summary is disapproved, the municipal waste combustion unit may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90-day period such that the Administrator withdraws the disapproval, municipal waste combustion unit operation may continue. [40 CFR 62.15135, 40 CFR 62.15140, Minn. R. 7011.1295]
5.6.25	A chief facility operator or shift supervisor who holds a certificate as described in Minn. R. 7011.1281, subp. 1 must be present at the waste combustor facility at all times when solid waste is being combusted, except if individuals are assuming the duties of chief facility operator or shift supervisor, the individuals must obtain full certification as described in Minn. R. 7011.1281 within six months of assuming such duties. [Minn. R. 7011.1240, subp. 1(A), Minn. R. 7011.1240, subp. 1a, Minn. R. 7011.1281]
5.6.26	Start-up on waste prohibited. During start-up from a cold furnace, the Permittee must use auxiliary fuels to achieve combustion chamber operating temperature. The use of solid waste solely to provide thermal protection of the grate or hearth during the start-up period when solid waste is not being fed to the grate is not considered to be continuous burning. [Minn. R. 7011.1240, subp. 3]
5.6.27	The Permittee must use natural gas to warm the combustion and pollution control devices and maintain good combustion conditions in the combustion chamber from the time the waste feed has been discontinued until the combustion chamber is clear of combustible material or active combustion ceases. [Minn. R. 7007.0800, subp. 2(A)]

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5.6.28	Fuel Type: natural gas, solid waste, RDF, and mixed municipal solid waste as defined in Minn. Stat. 115A.03, subp. 21, and other nonhazardous wastes approved through the facility's Industrial Solid Waste Management Plan. The Permittee is authorized to burn waste tires, yard waste, and household hazardous waste that are incidentally received co-mingled with municipal solid waste. The Permittee must not combust waste tires, yard waste, or household hazardous waste as a separate waste stream. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1220, subp. 2]
5.6.29	The dumpstack of a waste combustor must not be used for conducting routine inspection or maintenance on the control equipment or the combustion system without prior approval of the commissioner. A dumpstack shall only be used at a waste combustor when plant or worker safety would be in jeopardy without its use. The Permittee must record in the daily operating record required in Minn. R. 7011.1285, subp. 2, the date of use of the dumpstack, the length of time the dumpstack was used, the operating conditions of the waste combustor during dumpstack use, and the reason for using the dumpstack. [Minn. R. 7011.1240, subp. 7]
5.6.30	Three types of employees must complete the EPA operator training course: (1) Chief facility operators. (2) Shift supervisors. (3) Control room operators. These employees must complete the operator training course by the date before an employee assumes responsibilities that affect operation of the municipal waste combustion unit. [40 CFR 62.15105, Minn. R. 7011.1295]
5.6.31	Each chief facility operator and shift supervisor must obtain and maintain a current provisional operator certification from the American Society of Mechanical Engineers QRO-1-1994. The Permittee may obtain a copy from the American Society of Mechanical Engineers, Service Center, 22 Law Drive, Post Office Box 2900, Fairfield, NJ 07007. The Permittee may inspect a copy at the Office of Air Quality Planning and Standards Air Docket, EPA, 109 T.W. Alexander Drive, Room C521C, RTP, NC 27709 or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Each chief facility operator and shift supervisor must obtain a provisional certification by six months after they transfer to the municipal waste combustion unit or six months after they are hired to work at the municipal waste combustion unit. [40 CFR 62.15130(a) and (b), Minn. R. 7011.1295]
5.6.32	Operator Certification. A person shall be certified provided the person can demonstrate the completion of ASME provisional certification as described in Standard for the Qualification and Certification of Resource Recovery Facility Operators, American Society of Mechanical Engineers (ASME) QRO-1-1994, incorporated by reference in Minn. R. 7011.1205, for chief facility operators, shift supervisors, and control room operators of municipal waste combustors. [Minn. R. 7011.1280, subp. 1(A)]
5.6.33	Control room operators shall be certified as described in Minn. R. 7011.1280. Individuals, if assuming the duties of control room operator for the first time, shall obtain certification as described in Minn. R. 7011.1280 within six months of assuming such duties. [Minn. R. 7011.1240, subp. 1a(A)(5)]
5.6.34	Each chief facility operator and shift supervisor must take one of two actions: (1) Obtain a full certification from the American Society of Mechanical Engineers. (2) Schedule a full certification exam with the American Society of Mechanical Engineers (QRO-1-1994

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	(incorporated by reference in 40 CFR 60.17 of 40 CFR pt. 60, subp. A)). The chief facility operator and shift supervisor must obtain the full certification or be scheduled to take the certification exam by six months after they transfer to the municipal waste combustion unit or six months after they are hired to work at the municipal waste combustion unit. [40 CFR 62.15130(c) and (d), Minn. R. 7011.1295]
5.6.35	Individuals, if assuming the duties of chief facility operator or shift supervisor shall have obtained full certification as described in Minn. R. 7011.1281 within six months of assuming such duties. A "fully certified operator" means: A. a person who has obtained "certified municipal waste combustor examiner" certification as described in Minn. R. 7011.1282; B. a person who has obtained both "provisional certification" and "operator certification" according to ASME QRO-1-1994, incorporated by reference in Minn. R. 7011.1205; or C. a person who is a "fully certified operator" as described in Minn. R. 7011.1284. [Minn. R. 7011.1240, subp. 1a(A)(4), Minn. R. 7011.1280, subp. 1(A), Minn. R. 7011.1281]
5.6.36	The Permittee shall establish a program to review the plant-specific operating manual with people whose responsibilities affect the operation of the waste combustor. Initial review is required by the date before an employee assumes responsibilities that affect operation of the waste combustor unit. Waste combustor personnel shall review the operating manual relevant to a newly assigned position before assumption of new job-related activities affecting air emissions. The Permittee shall update and review the manual with staff annually. The Permittee must record the date of initial review, annual update, and annual review. [40 CFR 62.15115(b),(c),&(d), Minn. R. 7011.1295]
5.6.37	The Permittee shall develop and update on a yearly basis a site specific operating manual that shall, at a minimum, address the following elements of waste combustor unit operation: A. a summary of the applicable state rules and federal regulations to the activities described in the facility's air emissions permit; B. a description of basic combustion principles and theory applicable to the facility's waste combustor units; C. procedures for receiving, handling, and feeding municipal solid waste; D. waste combustor unit start-up, shutdown, and malfunction procedures; E. procedures for maintaining proper combustion air levels and supply; F. procedures for operating the waste combustor within the standards established in Minn. R. 7011.1201 to 7011.1294; G. procedures for responding to periodic upset or off-specification conditions; H. procedures for minimizing particulate matter carryover; I. procedures for monitoring the degree of solid waste burnout; J. procedures for handling ash; K. procedures for monitoring waste combustor emissions; L. procedures for reporting and record keeping; M. timetables and procedures for routine inspection and maintenance of equipment affecting air emissions; N. procedures for activating communications and alarm systems; and O. procedures to implement the facility's industrial waste management plan. The operating manual shall be kept in a location easily accessed by waste combustor personnel who have responsibilities which affect the operation of the waste combustor, including, but not limited to, chief facility operators, shift supervisors, operator supervisors, control room personnel, ash handlers,

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	maintenance personnel, and crane/load handlers. The Permittee must update the manual following each performance test to include operational changes resulting from emission performance testing results and include the revision dates within the operating manual. [Minn. R. 7011.1275, subp. 3]
5.6.38	For plant-specific training, the Permittee must do four things: (a) Develop a specific operating manual. (b) Establish a program to review the plant-specific operating manual with people whose responsibilities affect the operation of the municipal waste combustion units. Complete the initial review by the date before an employee assumes responsibilities that affect operation of the municipal waste combustion units. (c) Update this manual annually. (d) Review the manual with staff annually. The Permittee must include 11 items in the operating manual: (a) A summary of all applicable standards in 40 CFR pt. 62, subp. JJJ. (b) A description of the basic combustion principles that apply to municipal waste combustion units. (c) Procedures for receiving, handling, and feeding municipal solid waste. (d) Procedures to be followed during periods of startup, shutdown, and malfunction of the municipal waste combustion units. (e) Procedures for maintaining a proper level of combustion air supply. (f) Procedures for operating the municipal waste combustion units within the standards contained in 40 CFR pt. 62, subp. JJJ. (g) Procedures for responding to periodic upset or off-specification conditions. (h) Procedures for minimizing carryover of particulate matter. (i) Procedures for handling ash. (j) Procedures for monitoring emissions from the municipal waste combustion units. (k) Procedures for recordkeeping and reporting. The Permittee must keep the operating manual in an easily accessible location at the plant. It must be available for review or inspection by all employees who must review it and by the Administrator. [40 CFR 62.15115(a), 40 CFR 62.15120, 40 CFR 62.15125, Minn. R. 7011.1295]
5.6.39	Personnel without waste combustor or boiler operation experience must initially review the operating manual and work under the direct supervision of a certified operator or a certified operator's designee before assumption of job-related activities affecting air emissions for a minimum of 40 hours. The Permittee must record the dates of training sessions and the number of hours trained in each session. [Minn. R. 7011.1275, subp. 1(C)(1)]
5.6.40	Waste combustor facility personnel who have responsibilities which affect the operation of the waste combustor, including, but not limited to, chief facility operators, shift supervisors, operator supervisors, control room personnel, ash handlers, maintenance personnel, and crane/load handlers, must complete a program of instruction and on-the-job training based on the operating manual described in Minn. R. 7011.1275, subp. 3. The program must train facility personnel to maintain compliance with Minn. R. 7011.1201 to 7011.1294. Individual training shall be specific to the position held and shall, at a minimum, address the items in Minn. R. 7011.1275, subp. 3. For waste combustor facility personnel, the training program shall require: -initial review of the operating manual prior to assumption of any job-related activities affecting air emissions; -review of the operating manual relevant to a newly assigned position before assumption of new job-related activities affecting air emissions; and -annual review of the operating manual. [Minn. R. 7011.1275, subp. 1(A),(B),&(D)]

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5.6.41	Criteria; fully certified operator. A. To be eligible as a fully certified operator, an individual must maintain a provisional certificate from ASME or a certificate described in Minn. R. 7011.1280, and pass an examination administered by the waste combustor's certified municipal waste combustor examiner. B. The examination shall test comprehensive understanding of the content and procedures described in the waste combustor's operating manual that is required to be prepared for the facility by Minn. R. 7011.1275, subp. 3. C. If changes are made in equipment and/or operating procedures which the initial certification did not address, certificate holders shall demonstrate to the facility's certified examiner detailed knowledge of these changes within six months after the change is made. If the demonstration of knowledge has not been made within six months, the certificate shall expire. [Minn. R. 7011.1284]
5.6.42	All employees with responsibilities that affect how a municipal waste combustion unit operates must complete the plant-specific training course. Include at least six types of employees: (a) Chief facility operators. (b) Shift supervisors. (c) Control room operators. (d) Ash handlers. (e) Maintenance personnel. (f) Crane or load handlers. [40 CFR 62.15110, Minn. R. 7011.1295]
5.6.43	Training Program: Waste combustor personnel who have responsibilities which affect the operation of the waste combustor, including, but not limited to, chief facility operators, shift supervisors, operator supervisors, control room personnel, ash handlers, maintenance personnel, and crane/load handlers, must complete a program of instruction and on-the-job training based on the operating manual. The program must train facility personnel to maintain compliance with Minn. R. 7011.1201 to 7011.1294. Individual training shall be specific to the position held and shall, at a minimum, address the items in Minn. R. 7011.1275, subp. 3. The Permittee must: - Implement the training program for personnel; - Identify all personnel who must be trained; - Include a separate page for each personnel in the operating record; - Record the names of those who have been trained, the type of training received, the number of training hours, and the date training was completed. The Permittee must maintain as a part of the operating record required by Minn. R. 7011.1285, subp. 2, a record of the identity of all waste combustor personnel who have received training and the number of training hours. The records shall be provided to the commissioner on demand. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1274, subp. 4, Minn. R. 7011.1275, subp. 1-2]
5.6.44	The Permittee must keep the following records: (a) Records of provisional certifications. Include three items: (1) For the municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are provisionally certified by the American Society of Mechanical Engineers. (2) Dates of the initial provisional certifications. (3) Documentation showing current provisional certifications. (b) Records of full certifications. Include three items: (1) For the municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are fully certified by the American Society of Mechanical Engineers

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	or an equivalent State-approved certification program. (2) Dates of initial and renewal full certifications. (3) Documentation showing current full certifications. (c) Records showing completion of the operator training course. Include three items: (1) For the municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who have completed the EPA or State municipal waste combustion operator training course. (2) Dates of completion of the operator training course. (3) Documentation showing completion of operator training course. (d) Records of reviews for plant-specific operating manuals. Include three items: (1) Names of persons who have reviewed the operating manual. (2) Date of the initial review. (3) Dates of subsequent annual reviews. (e) Records of when a certified operator is temporarily offsite. Include two main items: (1) If the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours but for 2 weeks or less and no other certified operator is onsite, record the dates that the certified chief facility operator and certified shift supervisor were offsite. (2) When all certified chief facility operators and certified shift supervisors are offsite for more than 2 weeks and no other certified operator is onsite, keep records of four items: (i) A notice that all certified persons are offsite. (ii) The conditions that cause these people to be offsite. (iii) The corrective actions taken to ensure a certified chief facility operator or certified shift supervisor is onsite. (iv) Copies of the written reports submitted every 4 weeks that summarize the actions taken to ensure that a certified chief facility operator or certified shift supervisor will be onsite. (f) Records of calendar dates. Include the calendar date on each record. [40 CFR 62.15295, Minn. R. 7011.1295]
5.6.45	The Permittee shall maintain a record of personnel who complete either the Environmental Protection Agency municipal waste combustor operator training course, or an equivalent course. The record shall include documentation of training completion. [Minn. R. 7011.1280, subp. 11]
5.6.46	Record of certified operators. The Permittee shall maintain at the waste combustor facility for five years a record of the names of all personnel that the examiner has certified. This record shall contain the examination dates, the nature or content of the examination, the full name of the individual certified, the date of certification, and the signature of the certified examiner for that facility with the following certification: "I certify under penalty of law that, based on my examination of these persons, these persons have demonstrated the knowledge and skills that qualify these persons to be fully certified operators at Perham Resource Recovery Facility in accordance with the procedures of Minnesota Rules, parts 7011.1280 to 7011.1284." The Permittee shall maintain at the waste combustor facility for five years a record of the names of all personnel who have obtained provisional and/or full certification by ASME. The Permittee shall allow the commissioner to review all records related to the certification of operators, including the facility's program for the examination and certification of operators, the record required in Minn. R. 7011.1284, subp. 3, the content of examinations, and the results of an

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	individual's examination. [Minn. R. 7011.1284, subp. 3, Minn. R. 7011.1284, subp. 3a, Minn. R. 7011.1284, subp. 4]
5.6.47	Operation during performance testing. The Permittee must report operating conditions to the commissioner, including operating parameters of the air pollution control equipment, pressure drop across the fabric filters, flue gas temperatures, air flow rates, mercury/PCDD/PCDF control additive feed rate and acid gas control, and pressure drop across the combustion system. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1265, subp. 6]
5.6.48	For stack tests required under 40 CFR 62.15230, the Permittee must keep records of the maximum demonstrated load of the municipal waste combustion units and maximum temperature at the inlet of the particulate matter control devices during all stack tests for dioxins/furans emissions. [40 CFR 62.15300(c), Minn. R. 7011.1295]
5.6.49	Exceeding emission limits. If accurate and valid data results of a performance test demonstrate an exceedance of a standard of performance under Minn. R. 7011.1225 or in the waste combustor's air emission facility permit after normal start-up, the Permittee must take the actions in items A to D: A. The Permittee must report the exceedance to the commissioner as soon as reasonably possible with consideration to plant and worker safety and comply with the applicable reporting provisions of Minn. R. 7007.0800, subp. 6. B. The Permittee must take appropriate steps to return the waste combustor to compliance including additional performance test(s) and must demonstrate compliance within 60 days of the initial report of the exceedance. C. If the commissioner determines that compliance has not been achieved within 60 days of the initial report of exceedance, the waste combustor must be shut down on the 61st day after reporting the exceedance. D. If shutdown was required under item C, the waste combustor may be restarted under the conditions specified by the commissioner. The Permittee must notify the commissioner in writing of the date on which the Permittee plans to start up and to begin compliance testing. Notification must be at least ten days in advance of the compliance test date. The Permittee may restart the waste combustor for the purposes of compliance testing, provided that notification has been provided to the Commissioner. The Permittee is allowed to operate the waste combustor until the completion of the test, after which the waste combustor must be shut down. The waste combustor may be restarted only after the Permittee receives notice from the commissioner compliance has been achieved with the emissions standards or restarts for the purpose and duration of additional testing after further repair or operational changes. [Minn. R. 7007.0800, subp. 2(B), Minn. R. 7011.1265, subp. 11, Minn. Stat. 116.85, subd. 3]
5.6.50	Continuous Monitoring: The Permittee must install, calibrate, maintain, and operate continuous emission monitoring systems for oxygen (or carbon dioxide), sulfur dioxide, and carbon monoxide at the outlet of the air pollution control device. The Permittee must install, evaluate, and operate each continuous emission monitoring system according to the "Monitoring Requirements" in 40 CFR 60.13, subp. A. The Permittee must monitor the oxygen (or carbon dioxide) concentration at each location where sulfur dioxide and carbon monoxide are monitored. The Permittee may choose to monitor carbon dioxide instead of oxygen as a diluent gas. If the Permittee chooses to monitor carbon dioxide, then an oxygen monitor is not required and the

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	Permittee must follow the requirements in 40 CFR 62.15200. If the Permittee chooses to demonstrate compliance by monitoring the percent reduction of sulfur dioxide, the Permittee must also install a continuous emission monitoring system for sulfur dioxide and oxygen (or carbon dioxide) at the inlet of the air pollution control device. If the Permittee prefers to use an alternative sulfur dioxide monitoring method, such as parametric monitoring, or cannot monitor emissions at the inlet of the air pollution control device to determine percent reduction, the Permittee can apply to the Administrator for approval to use an alternative monitoring method under 40 CFR 60.13(i). [40 CFR 62.15175, Minn. R. 7011.1295]
5.6.51	Continuous monitors. The Permittee must install, calibrate, maintain, and operate a continuous monitoring system when burning solid waste. Monitoring systems that continuously read and record the following outputs must be installed: (1) for carbon monoxide at the waste combustor outlet; (2) for steam flow or an alternative unit load measurement parameter as described in Minn. R. 7011.1265, subp. 4a, in waste combustors that recover heat with a boiler; (3) for flue gas opacity, at a location after which the flue gas has exited the air pollution control equipment; and (4) for oxygen or carbon dioxide at each location where carbon monoxide, sulfur dioxide, or nitrogen oxides emissions are monitored, to report corrected concentrations of regulated pollutants. [Minn. R. 7011.1260, subp. 3]
5.6.52	The Permittee must also install, calibrate, maintain, and operate continuous monitor systems that read, record, and obtain representative measures of the process parameters from the affected facility for the following three operating parameters: (a) Load level of each municipal waste combustion unit. (b) Temperature of flue gases at the inlet of the particulate matter air pollution control devices. (c) Carbon feed rate if activated carbon is used to control dioxins/furans or mercury emissions. [40 CFR 60.13(f), 40 CFR 62.15260, Minn. R. 7011.1295, Minn. R. 7017.1010, subp. 1(A)]
5.6.53	The Permittee must install, calibrate, maintain, and operate temperature monitors that continuously read and record the temperatures of the flue gas at the inlet of each particulate matter control device. [Minn. R. 7011.1260, subp. 2]
5.6.54	Continuous Opacity Monitoring: The Permittee must install, calibrate, maintain, and operate a continuous opacity monitoring system for each waste combustor. The Permittee must install, evaluate, and operate each continuous opacity monitoring system according to 40 CFR 60.13. The Permittee must complete each continuous opacity monitoring system annual evaluation according to Performance Specification 1 in appendix B of 40 CFR part 60 no more than 13 months after the previous evaluation. The Permittee must use tests conducted according to EPA Reference Method 9, as specified in 40 CFR 62.15245, to determine compliance with the applicable opacity limit in 40 CFR pt. 62, subp. JJJ, Table 4. The data obtained from the continuous opacity monitoring system are not used to determine compliance with the opacity limit. [40 CFR 62.15215, Minn. R. 7011.1295]
5.6.55	The Permittee must install, calibrate, maintain, and operate a device to continuously measure the

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	temperature of the flue gas stream at the inlet of each particulate matter control device. [40 CFR 62.15270, Minn. R. 7011.1295]
5.6.56	Combustion chamber temperature monitor: The Permittee must install and operate continuous temperature monitors in the combustion unit. [Minn. R. 7011.1260, subp. 1]
5.6.57	Continuous Monitoring: The Permittee must: - Continuously monitor the selected mercury/PCDD/PCDF control additive (additive) feed rate operating parameter during all periods when the municipal waste combustion unit is operating and combusting waste. - Calculate the 8-hour block average additive feed rate in kilograms (or pounds) per hour. - When calculating the 8-hour block average, exclude hours when the unit is not operating and include hours when unit is operating but the additive feed system is not working correctly. [40 CFR 62.15275(c), Minn. R. 7011.1295]
5.6.58	Continuous Monitoring: The Permittee must obtain one-hour arithmetic averages from four or more data points equally spaced over each 1-hour period for: - Load level of the municipal waste combustion unit. - Temperature of the flue gases at the inlet of the particulate matter control device. - Mercury/PCDD/PCDF control additive feed rate. Data recorded during periods of continuous system breakdown, repair, calibration checks, and zero and span adjustments shall not be included in the data averages computed, unless there are, at least, two data points per hour. The Permittee must obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. The Permittee must obtain valid 1-hour averages for at least 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste. If the Permittee does not obtain the minimum data required, the Permittee is in violation of this data collection requirement and must notify the Administrator according to 40 CFR 62.15340(e). [40 CFR 60.13(e)(2), 40 CFR 60.13(h)(2), 40 CFR 62.15280, Minn. R. 7011.1295]
5.6.59	The Permittee must operate continuous monitors to measure and record data for at least 75 percent of the hours per day for 90 percent of the days of the calendar quarter that each waste combustor is operating and combusting solid waste. [Minn. R. 7011.1260, subp. 5(B)]
5.6.60	Continuous Monitoring: All continuous monitoring systems and monitoring devices required under 40 CFR pt. 60, including CEMS and COMS shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b), Minn. R. 7017.1010, subp. 1(A)]
5.6.61	Continuous Operation: Except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, all continuous monitoring systems (including CEMS and COMS) shall be in continuous operation during all periods of emission unit operation. This includes periods of emission unit start-up, shutdown, or malfunction. [40 CFR 60.13(e), Minn. R. 7017.1010, subp. 1(A), Minn. R. 7017.1090, subp. 1]
5.6.62	The Permittee must install, calibrate, maintain, and operate a steam flowmeter or a feed water flowmeter and meet five requirements: (1) Continuously measure and record the measurements of steam (or feed water) in kilograms per hour (or pounds per hour).

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	(2) Calculate steam (or feed water) flow in 4-hour block averages. (3) Calculate the steam (or feed water) flow rate using the method in "American Society of Mechanical Engineers (ASME PTC 4.1-1964): Test Code for Steam Generating Units, Power Test Code 4.1-1964 (Reaffirmed 1991)," section 4. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from the American Society of Mechanical Engineers, Service Center, 22 Law Drive, Post Office Box 2900, Fairfield, NJ 07007. You may inspect a copy at the Office of Air Quality Planning and Standards Air Docket, EPA, 109 T.W. Alexander Drive, Room C521C, RTP, NC 27709 or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. (4) Design, construct, install, calibrate, and use nozzles or orifices for flow rate measurements, using the recommendations in "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters", 6th Edition (1971), chapter 4. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from the American Society of Mechanical Engineers, Service Center, 22 Law Drive, Post Office Box 2900, Fairfield, NJ 07007. You may inspect a copy at the Office of Air Quality Planning and Standards Air Docket, EPA, 109 T.W. Alexander Drive, Room C521C, RTP, NC 27709 or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. (5) Before each dioxins/furans stack test, or at least once a year, calibrate all signal conversion elements associated with steam (or feed water) flow measurements according to the manufacturer instructions. [40 CFR 62.15265(a), Minn. R. 7011.1295]
5.6.63	Steam flow measurement method. The method contained in ASME PTC 4.1, section 4, incorporated by reference in Minn. R. 7011.1205, must be used for calculating the steam flow required under Minn. R. 7011.1260, subp. 3, item A, subitem (2). The recommendations of Application: Part II of Fluid Meters, Interim Supplement 19.5 on Instruments and Apparatus, chapter 4, incorporated by reference in Minn. R. 7011.1205, must be followed for design, construction, installation, calibration, and use of nozzles and orifices, except that measurement devices such as flow nozzles and orifices are not required to be recalibrated after they are installed. All signal conversion elements associated with steam flow measurements must be calibrated according to the manufacturer's instructions before each PCDD/PCDF test, and at least once per year. This annual calibration must be recorded in the daily operating record as described in Minn. R. 7011.1285, subp. 2. [Minn. R. 7011.1265, subp. 4]
5.6.64	If a municipal waste combustion unit does not generate steam, or, if the municipal waste combustion units have shared steam systems and steam load cannot be estimated per unit, the Permittee must determine, to the satisfaction of the Administrator, one or more operating parameters that can be used to continuously estimate load level (for example, the feed rate of municipal solid waste). The Permittee must continuously monitor the selected parameters. [40 CFR 62.15265(b), Minn. R. 7011.1295]
5.6.65	Alternative continuous measuring methods in place of steam flow may be installed and operated, provided that the method continuously measures the waste combustor unit load, is equivalent to results obtained when using the method in Minn. R. 7011.1265, subp. 4, and the use of the method is approved by the Commissioner and Administrator prior to installation. [Minn. R. 7011.1265, subp. 4a]
5.6.66	If the Permittee does not obtain the minimum data required in 40 CFR 62.15205(a) through (c), the Permittee must still use all valid data from the continuous emission monitoring systems in calculating emission concentrations and percent reductions in accordance with 40 CFR 62.15210.

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	Alternate methods for collecting data when continuous emission monitoring systems malfunction or when repairs, calibration checks, or zero and span checks keeps the Permittee from collecting the minimum amount of data: - Sulfur dioxide; use alternative Method 6C. - Carbon monoxide; use alternative Method 10 with alternative interference trap. [40 CFR 62.15205(e), 40 CFR 62.15225, Minn. R. 7011.1295]
5.6.67	The Permittee must use all valid data from the continuous emission monitoring systems in calculating emission concentrations and percent reductions. When continuous emissions data for sulfur dioxide removal efficiency, sulfur dioxide emission rates, or carbon monoxide are not obtained because of monitor breakdowns, repairs, calibration checks, and zero and span adjustments, emission data calculations to determine compliance must be made using the following methods: (1) for sulfur dioxide removal efficiency or sulfur dioxide emission concentrations, 40 CFR pt. 60, Appendix A, Method 19, as amended, to provide valid emission data to meet the requirements of Minn. R.7011.1260, subp. 5(B). Other monitoring systems or other data collection methods may be used as approved by the commissioner; and (2) for carbon monoxide, 40 CFR pt. 60, Appendix A, Method 10, as amended, to provide valid emission data to meet the requirements of Minn. R. 7011.1260, subp. 5(B). Other monitoring systems or other data collection methods may be used as approved by the commissioner. [Minn. R. 7011.1260, subp. 5(C)-(D)]
5.6.68	The Permittee must notify the Administrator according to 40 CFR 62.15340(e) if the minimum data required for continuously monitored emissions and parameters are not obtained. [40 CFR 62.15205(d), 40 CFR 62.15280(d), Minn. R. 7011.1295]
5.6.69	Exceeding continuously monitored emission limits. If accurate and valid data results collected from continuous monitors for sulfur dioxide or carbon monoxide data exceed emission limits established in Minn. R. 7011.1225 or this permit after normal start-up, the Permittee must take the following actions: A. The exceedance must be reported to the commissioner as soon as reasonably possible, giving consideration to matters of plant or worker safety or access to communications. B. Appropriate repairs or modifications to return the waste combustor to compliance must be commenced within 72 hours of the exceedance. C. If the waste combustor cannot be returned to compliance within 72 hours of the exceedance occurring, the waste combustor must be shut down. If the modifications to return the waste combustor to compliance require amending the air emission facility permit, the waste combustor must shut down within 72 hours of the exceedance. D. When repairs or modifications have been completed, the Permittee must demonstrate to the commissioner that the waste combustor is in compliance. The waste combustor may be started up after the Permittee notifies the commissioner in writing of the date the Permittee plans to start up the waste combustor and the date that compliance testing is scheduled. Notification must be given at least ten days in advance of the compliance test date. [Minn. R. 7011.1260, subp. 7]
5.6.70	The Permittee must keep records of the following items for continuously monitored pollutants or parameters. (a) Records of monitoring data. Document the following parameters measured using continuous monitoring systems: - All 6-minute average levels of opacity. - All 1-hour average concentrations of sulfur dioxide emissions. - All 1-hour average concentrations of carbon monoxide emissions. - All 1-hour average load levels of the municipal waste combustion units.

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	- All 1-hour average flue gas temperatures at the inlet of the particulate matter control device. (b) Records of average concentrations and percent reductions. Document the following parameters: - All 24-hour daily block geometric average concentrations of sulfur dioxide emissions or average percent reductions of sulfur dioxide emissions. - All 4-hour block or 24-hour daily block arithmetic average concentrations of carbon monoxide emissions. - All 4-hour block arithmetic average load levels of the municipal waste combustion units. - All 4-hour block arithmetic average flue gas temperatures at the inlet of the particulate matter control device. [40 CFR 62.15305(a)-(b), Minn. R. 7011.1295]
5.6.71	Recording data from continuous monitoring. The Permittee must maintain a permanent record of continuously measured parameters. The record of monitoring must contain: A. the calendar date; B. the following measurements recorded in a manner that allows the data to be immediately accessed upon inspection by the commissioner: (1) all six-minute opacity readings; (2) all one-hour average sulfur dioxide emission concentrations at the inlet and outlet of the acid gas control device if compliance is based on a percent reduction, or at the outlet only if compliance is based on the outlet emission limit; and (3) all one-hour average carbon monoxide emission concentrations, steam flow or alternative unit load measurement parameter as described in Minn. R. 7011.1265, subp. 4a, combustion chamber temperature, and particulate matter control device temperatures; and C. the following average concentrations and parameters: - all 24-hour daily geometric average percent reductions in sulfur dioxide emissions or all 24-hour daily geometric average sulfur dioxide emission concentrations, as applicable; - all four-hour block or 24-hour daily arithmetic average carbon monoxide emission concentrations, as applicable; and - all four-hour block arithmetic average unit load levels and particulate matter control device inlet temperatures. [Minn. R. 7011.1260, subp. 6]
5.6.72	Continuous monitoring records. The Permittee must keep records of: Records of exceedances. Document three items: (1) Calendar dates whenever any of the five pollutants or parameter levels recorded in 40 CFR 62.15305(b) or the opacity level recorded in 40 CFR 62.15305(a)(1) did not meet the emission limits or operating levels specified in 40 CFR pt. 62, subp. JJJ. (2) Reasons the applicable emission limits or operating levels were exceeded. (3) Corrective actions taken or are taking, to meet the emission limits or operating levels. Records of minimum data. Document three items: (1) Calendar dates for which the minimum amount of data required under 40 CFR 62.15205 and 62.15280 was not collected. Record these dates for these types of pollutants and parameters: sulfur dioxide emissions, carbon monoxide emissions, load levels of the municipal waste combustion unit, and temperatures of the flue gases at the inlet of the particulate matter control device. (2) Reasons the minimum data was not collected (3) Corrective actions taken or are taking to obtain the required amount of data. Records of exclusions. Document each time data was excluded from the calculation of averages for any of the following pollutants or parameters and the reasons the data were excluded: sulfur dioxide emissions, carbon monoxide emissions, load levels of the municipal waste combustion unit, and

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	temperatures of the flue gases at the inlet of the particulate matter control device. Records of drift and accuracy. Document the results of the daily drift tests and quarterly accuracy determinations according to Procedure 1 of appendix F of 40 CFR pt. 60. Keep these records for the sulfur dioxide and carbon monoxide continuous emissions monitoring systems. Records of the relationship between oxygen and carbon dioxide. If the Permittee chooses to monitor carbon dioxide instead of oxygen as a diluent gas, document the relationship between oxygen and carbon dioxide, as specified in 40 CFR 62.15200. Records of calendar dates. Include the calendar date on each record. [40 CFR 62.15305(c)-(h), Minn. R. 7011.1295]
5.6.73	The Permittee must keep all records onsite in paper copy or electronic format unless the Administrator approves another format. The Permittee must keep all records on each municipal waste combustion unit for at least 5 years. The Permittee must make all records available for submittal to the Administrator, or for onsite review by an inspector. [40 CFR 62.15290, Minn. R. 7011.1295]
5.6.74	The Permittee shall maintain records and submit reports as required in Minn. R. 7011.1285. The Permittee is subject to the record-keeping and reporting requirements in Minn. R. 7007.0800, subps. 5 and 6. The Permittee shall maintain on site all submittals required by Minn. R. 7011.1285 as paper copies for five years. [Minn. R. 7011.1285, subp. 1]
5.6.75	The Permittee must document all 4-hour block arithmetic average flue gas temperatures at the inlet of the particulate matter control device. [40 CFR 62.15305(b)(5), Minn. R. 7011.1295]
5.6.76	Daily Operating Record: The Permittee shall maintain a daily record of the operation of the waste combustor. The record shall contain: A. the calendar date; B. the hours of operation; B1. the time when waste begins feeding and the steam load at the time; B2. the time the waste feed to the combustion chamber ceases; C. the weight of solid waste combusted; D. the weight of solid waste requiring disposal at a solid waste land disposal facility, including separated noncombustibles, excess solid waste, and ash; E. the amount and description of industrial solid waste received each day, the generator's name, and the method of handling; F. the measurements and determination of emissions averages as required in Minn. R. 7011.1260, subpart 6; G. results of performance tests conducted on waste combustor units as required in Minn. R. 7011.1270; H. instances of dumpstack use, specifically addressing the length of time the dumpstack was used, the operating conditions of the waste combustor during dumpstack used, and the reason for using the dumpstack.; H1. the time when PM control equipment by-pass begins; H2. the time when PM control bypass ceases; I. the names of persons who have completed initial review or subsequent annual review of the operating manual; J. the reasons for exceeding any of the average emission rates, percent reductions, or operating parameters specified under Minn. R. 7011.1260, subp. 6, item C, or the opacity limit and a description of corrective actions taken; J1. Continuous monitoring system records including: each one-hour emission average recorded by the

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	CEMS, each six-minute opacity average recorded by the COMS, monitor certification test reports, excess emissions reports, cylinder gas audit reports, calibration error audit reports, relative accuracy test audits, linearity check reports, results of daily calibration drift checks, and log of adjustments made to the CEMS or COMS and maintenance performed on the CEMS or COMS; K. reasons for not obtaining the minimum number of hours of sulfur dioxide or operational data (opacity, carbon monoxide emissions, steam flow or alternative unit load measurement parameter as described in Minn. R. 7011.1265, subp. 4a, particulate matter control device temperature) and a description of corrective actions taken. L. the date of the calibration of all signal conversion elements associated with steam flow monitoring as required in Minn. R. 7011.1265, subp. 4. M. for waste combustors using an additive to comply with mercury or PCDD/PCDF emission limits, reasons for not maintaining the additive system operating parameter as determined in Minn. R. 7011.1272, subp. 2, and descriptions of corrective actions taken; and N. for waste combustors using an additive to comply with mercury or PCDD/PCDF emission limits, reasons for not maintaining the additive mass feed rates as determined in Minn. R. 7011.1272, subp. 1, and descriptions of corrective actions taken. N1. for control of Hg or dioxins, a record of the average additive system operating parameter and mass feed rate for each hour of operation. N2. record of the pressure drop across the fabric filters. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1285]
5.6.77	Records of exclusions. The Permittee must document each time data was excluded from the calculation of averages for any of the following and the reasons the data were excluded: - Sulfur dioxide emissions. - Carbon monoxide emissions. - Load levels of EQUI 36. - Temperatures of the flue gases at the inlet of the particulate matter control device. [40 CFR 62.15305(e), Minn. R. 7011.1295]
5.6.78	Recordkeeping: The Permittee must maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including any malfunction of the air pollution control equipment, or any periods during which a continuous monitoring system or monitoring device is inoperative. [Minn. R. 7007.0800, subp. 2(A)]
5.6.79	Recordkeeping and Recording of Mercury/PCDD/PCDF Control Additive Use. The Permittee must maintain a record of: - The average additive mass feed rate for each hour of operation (in kilograms or pounds per hour) during all stack tests for dioxin/furans (PCDD/PCDF) or mercury emissions, as measured by the operating parameter required in Minn. R. 7011.1272, subp. 2. If the operating parameter is not a direct measurement of the mass feed rate of the additive, then the record shall contain the calculations supporting the correlation between the mass feed rate and the measured operating parameter. -For the operating parameter chosen to monitor carbon feed rate, average operating level during all stack tests for dioxins/furans and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate. - All 8-hour block average mercury/PCDD/PCDF control additive feed rates in kilograms (pounds) per hour calculated from the monitored operating parameter. - Total mercury/PCDD/PCDF control additive purchased and delivered to the facility for each calendar quarter. If the Permittee chooses to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual

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	municipal waste combustion unit at the plant. Include supporting documentation. - Required quarterly usage of mercury/PCDD/PCDF control additive for the municipal waste combustion plant, calculated using equation 4 or 5 of 40 CFR 62.15390(f) (listed below). If the Permittee chooses to evaluate required quarterly usage for carbon on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit at the plant. Include supporting calculations. Equation 4, plant basis: C = SUMn(fi * hi) Where: C = required quarterly carbon usage for the plant in kilograms (or pounds). fi = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. This is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate). hi = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours). n = number of municipal waste combustion units, i, located at the plant. Equation 5, unit basis: C = f * h Where: C = required quarterly carbon usage for the unit in kilograms (or pounds). f = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. This is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate). h = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours). - Quarterly total additive bag usage consisting of number of bags, weight of each bag, weekly verification of weight, and monthly zero of scales. The Permittee shall maintain records on site in a form suitable for immediate inspection. [40 CFR 62.15310(a), 40 CFR 62.15390(f), Minn. R. 7011.1295]
5.6.80	The Permittee shall maintain a record of the average additive mass feed rate for each hour of operation, as measured by the operating parameter required in Minn. R. 7011.1272, subp. 2. If the operating parameter is not a direct measurement of the mass feed rate of the additive, then the record shall contain the calculations supporting the correlation between the mass feed rate and the measured operating parameter. The record shall be maintained on site in a form suitable for immediate inspection. [Minn. R. 7011.1272, subp. 3(A)]
5.6.81	Recordkeeping, Records of low mercury/PCDD/PCDF control additive feed rates. The Permittee must keep the following records: - The calendar dates and times when the average mercury/PCDD/PCDF control additive feed rate over

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	an 8-hour block was less than the average mercury/PCDD/PCDF control additive feed rates determined during the most recent mercury or PCDD/PCDF performance stack. - Reasons for the low mercury/PCDD/PCDF control additive feed rates. - Corrective actions taken to meet the 8-hour average mercury/PCDD/PCDF control additive feed rate requirement. The Permittee must record each time data was excluded from calculation of average mercury/PCDD/PCDF control additive feed rates and the reasons the data were excluded. [40 CFR 62.15310(b) and (d), Minn. R. 7011.1295]
5.6.82	The Permittee must submit annual reports, plus semiannual reports for any emission or parameter level that does not meet the limits of this permit. The Permittee must submit all reports on paper, postmarked on or before the submittal dates in 40 CFR 62.15325, 62.15335, and 62.15350. If the Administrator agrees, the Permittee may submit electronic reports. The Permittee must keep a copy of all reports required by 40 CFR 62.15330, 62.15340, and 62.15355 onsite for 5 years. [40 CFR 62.15315, Minn. R. 7011.1295]
5.6.83	The Permittee must submit a semiannual report on any recorded emission or parameter level that does not meet the requirements specified. If required, the Permittee must submit a semiannual report for data collected during the first half of a calendar year, by August 1 of that year. For data collected during the second half of the calendar year, the Permittee must submit the semiannual report by February 1 of the following year. [40 CFR 62.15345, 40 CFR 62.15350, Minn. R. 7011.1295]
5.6.84	The Permittee must include the following items in the semiannual out-of-compliance reports: (a) For concentration or percent reduction of sulfur dioxide emissions, concentration of carbon monoxide emissions, load level of the municipal waste combustion unit, temperature of the flue gases at the inlet of the particulate matter air pollution control device and/or average 6-minute opacity level (the data obtained from the continuous opacity monitoring system are not used to determine compliance with the limit on opacity emissions) that exceeded the limits specified in this permit, include the calendar date they exceeded the limits, the averaged and recorded data for that date, the reasons for exceeding the limits, and corrective actions. (b) If the results of the annual stack tests show emissions above the limits specified in this permit for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash, include a copy of the test report that documents the emission levels and corrective actions. (c) For municipal waste combustion units that apply activated carbon to control dioxins/furans or mercury emissions, include two items: (1) Documentation of all dates when the 8-hour block average carbon feed rate (calculated from the carbon injection system operating parameter) is less than the highest carbon feed rate established during the most recent mercury and dioxins/furans stack test (as specified in 40 CFR 62.15310(a)(1)). Include four items: (i) Eight-hour average carbon feed rate. (ii) Reasons for these occurrences of low carbon feed rates. (iii) The corrective actions taken to meet the carbon feed rate requirement. (iv) The calendar date. (2) Documentation of each quarter when total carbon purchased and delivered to the municipal waste combustion plant is less than the total required quarterly usage of carbon. If total carbon purchased and delivered is evaluated on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at the plant.

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	Include five items: (i) Amount of carbon purchased and delivered to the plant. (ii) Required quarterly usage of carbon. (iii) Reasons for not meeting the required quarterly usage of carbon. (iv) The corrective actions taken to meet the required quarterly usage of carbon. (v) The calendar date. [40 CFR 62.15355, Minn. R. 7011.1295]
5.6.85	Record keeping and recording of additive use. The Permittee shall maintain a record of the average additive mass feed rate for each hour of operation, as measured by the operating parameter required in Minn. R. 7011.1272, subp. 2. If the operating parameter is not a direct measurement of the mass feed rate of the additive, then the record shall contain the calculations supporting the correlation between the mass feed rate and the measured operating parameter. The record shall be maintained on site in a form suitable for immediate inspection. During each calendar quarter, the Permittee shall estimate the total additive used at the waste combustor in pounds or kilograms by two independent means: (1) the weight of additive delivered to the plant; and (2) estimate the average additive mass feed rate in pounds per hour, or kilograms per hour, for each hour of operation for each unit, based on the parameters measured in Minn. R. 7011.1272, subp. 2. Sum the results of the mass feed rates for all waste combustor units at the plant for the total number of hours of operation during the calendar quarter. [Minn. R. 7011.1272, subp. 3]
STRU 2	**South Unit Dump Stack - EQUI 35**
5.7.1	The Permittee must only use dumpstack STRU 2 when plant or worker safety would be in jeopardy without its use. [Minn. R. 7011.1240, subp. 7]
STRU 3	**North Unit Dump Stack - EQUI 36**
5.8.1	The Permittee must only use dumpstack STRU 3 when plant or worker safety would be in jeopardy without its use. [Minn. R. 7011.1240, subp. 7]
STRU 5	**Combined MWC Stack**
5.9.1	STRU 5: The Permittee must install and maintain a stack height >= 125.0 feet above ground level. [Minn. R. 7007.0800, subp. 2(A)]
TREA 1	**Fabric Filter - High Temperature, i.e., T>250 Degrees F**
5.10.1	Temperature <= 383 degrees Fahrenheit 4-hour block average as measured at the inlet to the PM control device (as determined during the April 29-30, 2026 PCDD/PCDF performance test). Notwithstanding the previous sentence, upon the Commissioner's written notification that the emission unit has demonstrated compliance under the conditions of a PCDD/PCDF performance test and prior to incorporation of the new PM control device inlet temperature into this permit, the PM control device inlet temperature shall not exceed a temperature greater than 30 degrees Fahrenheit (17 degree C) greater than the PM control device inlet temperature established during that compliant performance test. [40 CFR 62.15145(b), Minn. R. 7011.1240, subp. 2, Minn. R. 7011.1295, Minn. R. 7017.2025, subp. 3]
5.10.2	Pressure Drop >= 0.5 and <= 10.0 inches of water, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the follow up compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee must record the pressure drop on a 4-hour block average when in operation. If the recorded 4-hour block average pressure drop is outside the required range, the emissions during that time must be considered uncontrolled until the pressure drop is once again within the required range.

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	The period of time for which the pressure drop is considered out of range must be reported as a deviation. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A)]
5.10.3	The Permittee must vent emissions from EQUI 36 to TREA 1 whenever EQUI 36 operates, and operate and maintain TREA 1 at all times that any emissions are vented to TREA 1. The Permittee must document periods of non-operation of the control equipment TREA 1 whenever EQUI 36 is operating. [Minn. R. 7007.0800, subp. 2(A)]
5.10.4	If the Permittee replaces TREA 1, the replacement control must meet or exceed the requirements of TREA 1. Prior to making such a change, the Permittee must apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee must submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subp. 2(A)]
5.10.5	The Permittee must operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee must keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.10.6	Pressure Drop: Recordkeeping. The Permittee must record the pressure drop at least once every hour while in operation, calculate a 4-hour rolling average of the pressure drop, and record whether or not the 4-hour rolling average pressure drop was within the range specified in this permit. If the recorded 4-hour rolling average pressure drop is outside the required range, the emissions during that time shall be considered uncontrolled until the pressure drop is once again within the required range. Recorded values outside the range specified in this permit are considered Deviations as defined by Minn. R. 7007.0100, subp. 8a. [Minn. R. 7007.0800, subps. 4-5]
5.10.7	Corrective Actions: The Permittee must take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions must return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee must keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.10.8	Monitoring Equipment: The Permittee must install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation. [Minn. R. 7007.0800, subp. 4]
5.10.9	The Permittee must calibrate or replace the pressure drop monitor at least once every 12 months and must maintain a written record of any action resulting from the calibration. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.10.10	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee must inspect the control equipment components. The Permittee must maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
TREA 2	**Dry Limestone Injection**
5.11.1	The Permittee must maintain the lime feed rate as >= 127.10 pounds per hour, 8-hour block average (as determined during the April 29-30, 2026 hydrogen chloride (HCl) performance test). The Permittee must keep records of the 8-hour block average feed rate at all times EQUI 36 is in operation. The Permittee must use the same or similar reagent as used during the most recent

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	compliant HCl performance test. The Permittee must calibrate the feed rate at least once per day of operation. Notwithstanding the previous sentence, upon the Commissioner's written notification that EQUI 36 has demonstrated compliance under the conditions of a HCl performance test, the Permittee must maintain the lime feed rate determined during the most recent compliant HCl performance test. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7017.2025, subp. 3a]
5.11.2	The Permittee must conduct a daily visual inspection of the dry limestone injection to ensure that the control equipment is properly operating. [Minn. R. 7007.0800, subp. 4]
5.11.3	Daily Recordkeeping: On each day of operation, the Permittee must keep a record of the dry limestone injection equipment inspection. The record must include any corrective actions taken if the control equipment was not operating properly or needed repair. The Permittee must also keep a record of lime feed rate calibrations to verify that the feed rate is equal to or greater than the hourly lime feed rate during the most recent MPCA approved performance test. [Minn. R. 7007.0800, subp. 4-5]
5.11.4	The Permittee must vent emissions from EQUI 36 to TREA 2 whenever EQUI 36 operates, and operate and maintain TREA 2 at all times that any emissions are vented to TREA 2. The Permittee must document periods of non-operation of the control equipment TREA 2 whenever EQUI 36 is operating. [Minn. R. 7007.0800, subp. 2(A)]
5.11.5	If the Permittee replaces TREA 2, the replacement control must meet or exceed the requirements of TREA 2. Prior to making such a change, the Permittee must apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee must submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subp. 2(A)]
5.11.6	Recordkeeping of Lime Feed Rate: The Permittee must record the lime feed rate at least once every hour while in operation, calculate the 8-hour block average, and record whether or not the 8-hour block average met the feed rate of lime limit specified under TREA 2. Recorded values outside any range specified in this permit are considered Deviations as defined by Minn. R. 7007.0100, subp. 8a. [Minn. R. 7007.0800, subp. 4-5]
5.11.7	Corrective Actions: The Permittee must take corrective action as soon as possible if any of the following occur: - the recorded lime feed rate is below the required rate; - fabric filter cleaning cycle indicates evidence of dry limestone injection malfunction; or - the dry limestone injection or any of its components are found during the inspections to need repair. Corrective actions must return the lime feed rate to within the permitted range(s), and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the Operation and Maintenance (O & M) Plan for the dry limestone injection. The Permittee must keep a record of the type and date of any corrective action taken for the dry limestone injection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.11.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee must inspect the control equipment components. The Permittee must maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
5.11.9	Monitoring Equipment: The Permittee must install and maintain the necessary monitoring equipment

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	for measuring and recording lime feed rate as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored dry limestone injection is in operation. [Minn. R. 7007.0800, subp. 4]
5.11.10	The Permittee must calibrate or replace the lime feed rate monitors at least once every 12 months and must maintain a written record of any action resulting from the calibration. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.11.11	The Permittee must operate and maintain the dry limestone injection in accordance with the O & M Plan. The Permittee must keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
TREA 3	**Activated Carbon Adsorption**
5.12.1	The Permittee must maintain Mercury additive >= 4.0 pounds per hour 8-hour block average (as determined during the April 29-30, 2026 PCDD/PCDF performance test). Notwithstanding the previous sentence, upon the Commissioner's written notification that the emissions unit has demonstrated compliance under the conditions of a PCDD/PCDF or mercury performance test and prior to incorporation of the mercury/ PCDD/PCDF control additive feed rate into this permit, the Permittee must maintain the greater of the following: the additive feed rate determined during the most recent compliant mercury performance test or the most recent compliant PCDD/PCDF performance test. [40 CFR 62.15145(c), Minn. R. 7011.1240, subp. 5, Minn. R. 7011.1272, subp. 2, Minn. R. 7011.1295, Minn. R. 7017.2025, subp. 3]
5.12.2	The Permittee must evaluate total carbon usage (additive) for each calendar quarter. The total amount of carbon purchased and delivered to the municipal waste combustion plant must be at or above the required quarterly usage of carbon. The Permittee must evaluate required quarterly carbon usage on a municipal waste combustion unit basis for each individual municipal waste combustion unit at the plant. Calculate the required quarterly usage of carbon using the appropriate equation in 40 CFR 62.15390. [40 CFR 62.15145(d), Minn. R. 7011.1295]
5.12.3	During each calendar quarter, the Permittee must estimate the total additive used at the waste combustor in pounds or kilograms by two independent means as described in the following: 1) the weight of additive delivered to the plant; and 2) estimate the average additive mass feed rate in pounds per hour, or kilograms per hour, for each hour of operation for each unit, based on the activated carbon feeder auger rotation rate. Sum the results of the mass feed rates for all waste combustor units at the plant for the total number of hours of operation during the calendar quarter. [Minn. R. 7011.1272, subp. 3(B)]
5.12.4	Records of average carbon feed rate for mercury and dioxins/furans (PCDD/PCDF) control. The Permittee must record and maintain the following: 1) Average carbon feed rate (in kilograms or pounds per hour) during all stack tests for dioxins/furans and mercury emissions. Include supporting calculations in the records. 2) For the operating parameter chosen to monitor carbon feed rate, average operating level during all stack tests for dioxins/furans and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate. 3) All 8-hour block average carbon feed rates in kilograms (pounds) per hour calculated from the monitored operating parameter. [40 CFR 62.15310(a)(1)-(3), Minn. R. 7011.1295]
5.12.5	Records of low carbon feed rates. The Permittee must record and maintain the following: 1) The calendar dates when the average carbon feed rate over an 8-hour block was less than the average carbon feed rates determined during the most recent stack test for dioxins/furans or mercury

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	emissions (whichever has a higher feed rate). 2) Reasons for the low carbon feed rates. 3) Corrective actions the Permittee took or are taking to meet the 8-hour average carbon feed rate requirement. 4) Document each time data is excluded from the calculation of average carbon feed rates and the reasons the data were excluded. [40 CFR 62.15310(b) and (d), Minn. R. 7011.1295]
5.12.6	The Permittee shall vent emissions from EQUI 36 to TREA 3 whenever EQUI 36 operates, and operate and maintain TREA 3 at all times that any emissions are vented to TREA 3. The Permittee shall document periods of non-operation of the control equipment TREA 3 whenever EQUI 36 is operating. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A)]
5.12.7	Daily Inspections: At least once per day while operating, the Permittee must visually inspect the carbon injection control equipment for proper operation (i.e., no plugging of carbon, etc.). The Permittee must maintain a record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 4]
5.12.8	The Permittee must maintain a record of the carbon injection rate at all times EQUI 36 is in operation. [Minn. R. 7007.0800, subp. 4-5]
5.12.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - fabric filter cleaning cycle indicates evidence of carbon injection malfunction; - the recorded additive feed rate is outside the required operating range; or - the carbon injection or any of its components are found during the inspections to need repair. Corrective actions shall return the additive feed rate to within the permitted range, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
5.12.10	Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording additive feed rate as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the carbon injection is in operation. [Minn. R. 7007.0800, subp. 4, Minn. R. 7017.0200]
5.12.11	The Permittee shall operate and maintain the control equipment in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.12.12	Quarterly Inspections: At least once per calendar quarter, the Permittee must inspect the control equipment system components. The Permittee must maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
5.12.13	Annual Inspection: At least once per calendar year, the Permittee must conduct an internal inspection of the control device that includes all operating systems of the control device. The Permittee shall maintain a written record of the inspection and any action resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4-5]
TREA 4	**Fabric Filter - High Temperature, i.e., T>250 Degrees F**
5.13.1	Temperature <= 361 degrees Fahrenheit 4-hour block average as measured at the inlet to the PM control device (as determined during the May 14-16, 2024 PCDD/PCDF performance test). Notwithstanding the previous sentence, upon the Commissioner's written notification that the emission unit has demonstrated compliance under the conditions of a PCDD/PCDF performance test

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	and prior to incorporation of the new PM control device inlet temperature into this permit, the PM control device inlet temperature shall not exceed a temperature greater than 30 degrees Fahrenheit (17 degree C) greater than the PM control device inlet temperature established during that compliant performance test. [40 CFR 60.1200(b), Minn. R. 7011.1240, subp. 2, Minn. R. 7011.1293, Minn. R. 7017.2025, subp. 3]
5.13.2	Pressure Drop >= 0.5 and <= 10.0 inches of water, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the follow up compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee must record the pressure drop on a 4-hour block average when in operation. If the recorded 4-hour block average pressure drop is outside the required range, the emissions during that time must be considered uncontrolled until the pressure drop is once again within the required range. The period of time for which the pressure drop is considered out of range must be reported as a deviation. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A)]
5.13.3	The Permittee must vent emissions from EQUI 35 to TREA 4 whenever EQUI 35 operates, and operate and maintain TREA 4 at all times that any emissions are vented to TREA 4. The Permittee must document periods of non-operation of the control equipment TREA 4 whenever EQUI 35 is operating. [Minn. R. 7007.0800, subp. 2(A)]
5.13.4	If the Permittee replaces TREA 4, the replacement control must meet or exceed the requirements of TREA 4. Prior to making such a change, the Permittee must apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee must submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subp. 2(A)]
5.13.5	The Permittee must operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee must keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.13.6	Pressure Drop: Recordkeeping. The Permittee must record the pressure drop at least once every hour while in operation, calculate a 4-hour rolling average of the pressure drop, and record whether or not the 4-hour rolling average pressure drop was within the range specified in this permit. If the recorded 4-hour rolling average pressure drop is outside the required range, the emissions during that time shall be considered uncontrolled until the pressure drop is once again within the required range. Recorded values outside the range specified in this permit are considered Deviations as defined by Minn. R. 7007.0100, subp. 8a. [Minn. R. 7007.0800, subps. 4-5]
5.13.7	Corrective Actions: The Permittee must take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions must return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee must keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.13.8	Monitoring Equipment: The Permittee must install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.

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	[Minn. R. 7007.0800, subp. 4]
5.13.9	The Permittee must calibrate or replace the pressure drop monitor at least once every 12 months and must maintain a written record of any action resulting from the calibration. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.13.10	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee must inspect the control equipment components. The Permittee must maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
TREA 5	**Dry Limestone Injection**
5.14.1	The Permittee must maintain the lime feed rate as >= 142.0 pounds per hour, 8-hour block average (as determined during the May 14-16, 2024 hydrogen chloride (HCl) performance test). The Permittee must keep records of the 8-hour block average feed rate at all times EQUI 35 is in operation. The Permittee must use the same or similar reagent as used during the most recent compliant HCl performance test. The Permittee must calibrate the feed rate at least once per day of operation. Notwithstanding the previous sentence, upon the Commissioner's written notification that EQUI 35 has demonstrated compliance under the conditions of a HCl performance test, the Permittee must maintain the lime feed rate determined during the most recent compliant HCl performance test. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7017.2025, subp. 3a]
5.14.2	The Permittee must conduct a daily visual inspection of the dry limestone injection to ensure that control equipment is properly operating. [Minn. R. 7007.0800, subp. 4]
5.14.3	Daily Recordkeeping: On each day of operation, the Permittee must keep a record of the dry limestone injection equipment inspection. The record must include any corrective actions taken if the control equipment was not operating properly or needed repair. The Permittee must also keep a record of lime feed rate calibrations to verify that the feed rate is equal to or greater than the hourly feed rate during the most recent MPCA approved performance test. [Minn. R. 7007.0800, subp. 4-5]
5.14.4	The Permittee must vent emissions from EQUI 35 to TREA 5 whenever EQUI 35 operates, and operate and maintain TREA 5 at all times that any emissions are vented to TREA 5. The Permittee must document periods of non-operation of the control equipment TREA 5 whenever EQUI 35 is operating. [Minn. R. 7007.0800, subp. 2(A)]
5.14.5	If the Permittee replaces TREA 5, the replacement control must meet or exceed the requirements of TREA 5. Prior to making such a change, the Permittee must apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee must submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subp. 2(A)]
5.14.6	Recordkeeping of Lime Feed Rate: The Permittee must record the lime feed rate at least once every hour while in operation, calculate the 8-hour block average, and record whether or not the 8-hour block average met the feed rate of lime limit specified under TREA 2. Recorded values outside any range specified in this permit are considered Deviations as defined by Minn. R. 7007.0100, subp. 8a. [Minn. R. 7007.0800, subp. 4-5]
5.14.7	Corrective Actions: The Permittee must take corrective action as soon as possible if any of the following occur: - the recorded lime feed rate is below the required rate; - fabric filter cleaning cycle indicates evidence of dry limestone injection malfunction; or

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	- the dry limestone injection or any of its components are found during the inspections to need repair. Corrective actions must return the lime feed rate to within the permitted range(s), and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the Operation and Maintenance (O & M) Plan for the dry limestone injection. The Permittee must keep a record of the type and date of any corrective action taken for the dry limestone injection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.14.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee must inspect the control equipment components. The Permittee must maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
5.14.9	Monitoring Equipment: The Permittee must install and maintain the necessary monitoring equipment for measuring and recording lime feed rate as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored dry limestone injection is in operation. [Minn. R. 7007.0800, subp. 4]
5.14.10	The Permittee must calibrate or replace the lime feed rate monitors at least once every 12 months and must maintain a written record of any action resulting from the calibration. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.14.11	The Permittee must operate and maintain the dry limestone injection in accordance with the O & M Plan. The Permittee must keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
TREA 6	**Activated Carbon Adsorption**
5.15.1	The Permittee must maintain Mercury additive >= 4.0 pounds per hour 8-hour block average (as determined during the May 14-16, 2024 mercury and dioxin performance tests). Notwithstanding the previous sentence, upon the Commissioner's written notification that the emissions unit has demonstrated compliance under the conditions of a PCDD/PCDF or mercury performance test and prior to incorporation of the mercury/ PCDD/PCDF control additive feed rate into this permit, the Permittee must maintain the greater of the following: the additive feed rate determined during the most recent compliant mercury performance test or the most recent compliant PCDD/PCDF performance test. [40 CFR 60.1200(c), Minn. R. 7011.1240, subp. 5, Minn. R. 7011.1272, subp. 2, Minn. R. 7011.1293, Minn. R. 7017.2025, subp. 3]
5.15.2	The Permittee must evaluate total carbon usage (additive) for each calendar quarter. The total amount of carbon purchased and delivered to the municipal waste combustion plant must be at or above the required quarterly usage of carbon. The Permittee must evaluate required quarterly carbon usage on a municipal waste combustion unit basis for each individual municipal waste combustion unit at the plant. Calculate the required quarterly usage of carbon using the appropriate equation in 40 CFR 60.1460(f). [40 CFR 60.1200(d), Minn. R. 7011.1293]
5.15.3	During each calendar quarter, the Permittee must estimate the total additive used at the waste combustor in pounds or kilograms by two independent means as described in the following: 1) the weight of additive delivered to the plant; and 2) estimate the average additive mass feed rate in pounds per hour, or kilograms per hour, for each hour of operation for each unit, based on the activated carbon feeder auger rotation rate. Sum the results of the mass feed rates for all waste combustor units at the plant for the total number of hours of operation during the calendar quarter. [Minn. R. 7011.1272, subp. 3(B)]
5.15.4	Records of average carbon feed rate for mercury and dioxins/furans (PCDD/PCDF) control. The Permittee must record and maintain the following:

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	(1) Average carbon feed rate in kilograms (or pounds) per hour during all stack tests for dioxins/furans and mercury emissions. Include supporting calculations in the records. (2) For the operating parameter chosen to monitor carbon feed rate, average operating level during all stack tests for dioxins/furans and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate. (3) All 8-hour block average carbon feed rates in kilograms (or pounds) per hour calculated from the monitored operating parameter. (4) Total carbon (additive) purchased and delivered for each individual municipal waste combustion unit. Include supporting documentation. (5) Required quarterly usage for each municipal waste combustion unit. Include supporting calculations. [40 CFR 60.1370(a), Minn. R. 7011.1293]
5.15.5	Records of low carbon feed rates. The Permittee must record and maintain the following: (1) The calendar dates when the average carbon feed rate over an 8-hour block was less than the average carbon feed rates determined during the most recent stack test for dioxins/furans or mercury emissions (whichever has a higher feed rate). (2) Reasons for the low carbon feed rates. (3) Corrective actions taken to meet the 8-hour average carbon feed rate requirement. 4) Document each time data is excluded from the calculation of average carbon feed rates and the reasons the data were excluded. [40 CFR 60.1370(b) and (d), Minn. R. 7011.1293]
5.15.6	The Permittee shall vent emissions from EQUI 35 to TREA 6 whenever EQUI 35 operates, and operate and maintain TREA 6 at all times that any emissions are vented to TREA 6. The Permittee shall document periods of non-operation of the control equipment TREA 6 whenever EQUI 35 is operating. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2]
5.15.7	Daily Inspections: At least once per day while operating, The Permittee must visually inspect the carbon injection control equipment for proper operation (i.e., no plugging of carbon, etc.). The Permittee must maintain a record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 4-5]
5.15.8	The Permittee must maintain a record of the carbon injection rate at all times EQUI 35 is in operation. [Minn. R. 7007.0800, subp. 4(B)]
5.15.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - fabric filter cleaning cycle indicates evidence of carbon injection malfunction; - the recorded additive feed rate is outside the required operating range; or - the carbon injection or any of its components are found during the inspections to need repair. Corrective actions shall return the additive feed rate to within the permitted range, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
5.15.10	Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording additive feed rate as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the carbon injection is in operation. [Minn. R.

Requirement number	Requirement and citation
	7007.0800, subp. 4]
5.15.11	The Permittee shall operate and maintain the control equipment in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.15.12	Quarterly Inspections: At least once per calendar quarter, the Permittee must inspect the control equipment system components. The Permittee must maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
5.15.13	Annual Inspection: At least once per calendar year, the Permittee must conduct an internal inspection of the control device that includes all operating systems of the control device. The Permittee shall maintain a written record of the inspection and any action resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4-5]

6. Submittal/action requirements

This section lists most of the submittals required by this permit. Please note that some submittal requirements may appear in the Limits and Other Requirements section, or, if applicable, within a Compliance Schedule section.

Requirement number	Requirement and citation
TFAC 2	**Perham Resource Recovery Facility**
6.1.1	Ash Testing Report: The Permittee must submit an annual ash testing report to the Commissioner by March 15 of each year. The report must include the following information: A. Results of annual analyses of ash as required by Minn. R. 7035.2910. Total composition results must be reported on a dry weight basis. B. Discussion of the data, including identification of trends observed by comparing the most recent year's results with those of previous years. In particular, the Permittee must assess whether the waste combustor is in compliance with the goals of Minnesota Statutes, section 115A.97, subdivision 1, clause (1). C. Data quality assurance assessment, including the following: (1) precision and accuracy of each method used; (2) representativeness of the samples; (3) potential effect of any field or laboratory contamination on the sampling results; and (4) qualification or rejection of data based on the results of quality control samples. D. Information summarizing operation of the waste combustor(s) (EQUIs 1 and 19) during the ash sampling periods, and data regarding ash sample processing recorded according to Minn. R. 7035.2910, subp. 9. Operating information must include an estimate of the quantity and type of wastes other than mixed municipal solid waste which were combusted at the facility during the ash sampling period. If leachate was added to the waste during the sampling period, the quantity of leachate added and source of the leachate must be noted. E. Certification by the Permittee that samples analyzed to fulfill the requirements of Minn. R. 7035.2910 were collected according to the plan required by Minn. R. 7035.2910, subp. 6, and that no actions were taken during the sample collection period to intentionally affect the results of ash sample analysis so that the results would not be representative of ash typically generated by the waste combustor(s). Such actions may include, for example, altering the type of waste combusted

Requirement number	Requirement and citation
	during the sampling period. F. Identification of any changes in test methods or parameters made in accordance with Minn. R. 7035.2910, subp. 4, items D and E. [Minn. R. 7007.0801, subp. 2(D), Minn. R. 7035.2910, subp. 10]
6.1.2	Waste Composition Study: due before 04/17/2028 and at end of each calendar five years after. The Permittee shall submit the waste composition study 45 days after completion of the study. The waste composition study must consist of the results of an analysis of the solid wastes or mixtures of solid wastes to be combusted, which uses the sampling methods prescribed in "Test Methods for Evaluating Solid Waste," SW-846, or any other sampling method approved in writing by the commissioner. The commissioner shall approve a sampling method where the commissioner determines that the precision and accuracy of the method are equivalent to that of the method set forth in "Test Methods for Evaluating Solid Waste," SW-846. The study shall include all of the analyses in subitems (1) to (4): (1) A fractional analysis of the solid waste, including percentage by weight of combustible and noncombustible materials in the solid waste stream and a solid waste sort that identifies, at a minimum, the percent by weight of paper, cardboard, plastic, ferrous and nonferrous metals, solid wastes which contain mercury, glass, organic, and inorganic material in the solid waste stream. The fractional analysis shall identify recyclable and problem materials. (2) A proximate analysis of the solid waste, which shall include the percentage of volatile matter, moisture content, ash content, and fixed carbon by difference. Analysis methods used to determine the proximate analysis of the solid waste shall be performed in accordance with ASTM methods E897, E790, and E830 for volatile matter, moisture content, and ash content, respectively. (3) An ultimate analysis of the solid waste, which shall include the percentage of carbon, hydrogen, nitrogen, oxygen, sulfur, chlorine, and oxygen by difference. Analysis methods used to determine the ultimate analysis of the solid waste shall be performed in accordance with ASTM methods E777, E778, E775, and E776 for carbon and hydrogen, nitrogen, sulfur, and chlorine, respectively. (4) The heat value of the solid waste. Analysis methods used to determine the heat value of the solid waste shall be performed in accordance with either ASTM E955 or any other analysis method approved in writing by the commissioner. The commissioner shall approve an analysis method where the commissioner determines precision and accuracy of the method are equivalent to that of the methods set forth in ASTM E955. [Minn. R. 7007.0501, subp. 2(A), Minn. R. 7011.1270, subp. 3(E)]
6.1.3	By Feb. 1 of each calendar year, the Permittee must submit an updated plan to separate solid wastes which contain mercury to the Commissioner, for the facility. The updated plan must identify improvements that have been made to the plan to increase identification, separation, and collection before combustion of mercury from the solid waste stream. If no changes are being made, the Permittee must state that no changes are being made for that year. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1255, subp. 1, Minn. R. 7011.1255, subp. 3]
6.1.4	EBD Modeling Submittal for PM2.5: For changes meeting the criteria in the EBD Modeling Triggers (Modeling Required) requirement, the Permittee may submit an EBD analysis using form AQDM-08. To use an EBD analysis to demonstrate compliance, the baseline modeling (the most recent approved refined modeling demonstration) must be valid as defined in the current version of the MPCA modeling practices manual. The results of the analysis must demonstrate that the proposed change is equivalent or better than the baseline model. When an EBD is submitted for a change, the Permittee must wait for written approval before making the change. When approval is received, construction may begin according to the applicable Minnesota Rules. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
6.1.5	Computer Dispersion Modeling Protocol for PM2.5: If the requirement to conduct Computer Dispersion Remodeling is triggered, the Permittee must submit a computer dispersion modeling protocol for the total facility including the proposed change. This protocol will describe the proposed

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	modeling methodology and input data, in accordance with the current version of the MPCA modeling practices manual. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
6.1.6	Computer Dispersion Modeling Results for PM2.5: Once approval of the Computer Dispersion Modeling Protocol is received, the Permittee must submit a Computer Dispersion Modeling Report in accordance with the current version of the MPCA modeling practices manual and the approved Computer Dispersion Modeling Protocol. The Report must be included with the permit application when an application is required for the proposed change. When a modeling report is required for a change, the Permittee must wait for written approval before making the change. When approval is received, construction may begin according to the applicable Minnesota Rules. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
6.1.7	The Permittee shall submit excess emission/downtime report : Due by 30 days after the end of each calendar quarter following permit issuance. Submit this on form DRF-1 (Excess Emissions Reporting) as amended. The EER shall indicate all periods of monitor bypass and exceedances of the limit including those allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions, as well as a summary of audit results and frequencies. If no excess emissions, downtime or bypasses occurred during the quarter, submit a signed report supplying the necessary monitor data needed to verify this. [Minn. R. 7017.1110, subp. 1-2]
6.1.8	The Permittee must submit a semiannual deviations report : Due semiannually, by the 30th of January and July. The first semiannual report submitted by the Permittee must cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. Submit this on form DRF-2 (Deviation Reporting Form). If no deviations have occurred, submit the signed report certifying that there were no deviations. [Minn. R. 7007.0800, subp. 6(B)(2)]
6.1.9	The Permittee must submit a compliance certification : Due annually, by the 31st of January (for the previous calendar year). Submit this on form CR-04 (Annual Compliance Certification Report). This report covers all deviations experienced during the calendar year. If no deviations have occurred, submit the signed report certifying that there were no deviations. [Minn. R. 7007.0800, subp. 6(D)]
6.1.10	The Permittee shall submit an application for permit reissuance : Due 180 calendar days before Permit Expiration Date. [Minn. R. 7007.0400, subp. 2]
COMG 3	**Continuous Emission Monitors**
6.2.1	Certification Test Plan due 30 days before Certification Test. Certification Test Pretest Meeting due seven days before Certification Test. Certification Test Report due 45 days after Certification Test. Notify the commissioner prior to making any planned change or if unforeseen, within two working days, when a monitor must be recertified as outlined in Minn. R. 7017.1050, subp. 2. Test plans and reports must be submitted in a format specified by the commissioner. [40 CFR 60.7(a)(5), Minn. R. 7017.1060, subp. 1-3, Minn. R. 7017.1080]
6.2.2	CEMS Certification/Recertification Test: due 90 days after the first excess emissions report required for the CEMS or any change which invalidates the monitor's certification status as outlined in Minn. R. 7017.1050, subp. 2. [40 CFR 60.13(b), Minn. R. 7017.1010, subp. 1(A)]
6.2.3	Installation Notification: due 60 days before installing the continuous emissions monitoring system. The notification shall include plans and drawings of the system. [Minn. R. 7017.1040, subp. 1]
COMG 4	**Continuous Opacity Monitors**
6.3.1	Installation Notification: due 60 days before installing the continuous Opacity monitoring system. The notification shall include plans and drawings of the system. [Minn. R. 7017.1040, subp. 1]
6.3.2	COMS Certification/Recertification Test: due 90 days after the first excess emissions report required

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	for the COMS or any change which invalidates the monitor's certification status as outlined in Minn. R. 7017.1050, subp. 2. [Minn. R. 7017.1050, subp. 1]
6.3.3	The Permittee shall submit start-up notification: Due 10 working days after Startup of Monitor Date. The notification shall be submitted electronically on Form CS-02. [Minn. R. 7007.0800, subp. 2(A)]
EQUI 9	**South Unit O2/CO/SO2 Monitor - O2**
6.4.1	Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter in which a RATA was conducted. [Minn. R. 7017.1180, subp. 3]
6.4.2	Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter in which a CGA was conducted. [Minn. R. 7017.1180, subp. 1]
6.4.3	The Permittee must conduct a cylinder gas audit: Due by the end of each three of four calendar quarters but no more than three quarters in succession. A CGA is not required during any calendar quarter in which a RATA was performed. [40 CFR pt. 60, Appendix F, 5.1.2, Minn. R. 7017.1010, subp. 1(C)]
6.4.4	The Permittee must conduct a relative accuracy test audit: Due one of each four calendar quarters. [40 CFR pt. 60, Appendix F, 5.1.1, Minn. R. 7017.1010, subp. 1(C)]
EQUI 10	**South Unit O2/CO/SO2 Monitor - CO**
6.5.1	Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter in which a RATA was conducted. [Minn. R. 7017.1180, subp. 3]
6.5.2	Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter in which a CGA was conducted. [Minn. R. 7017.1180, subp. 1]
6.5.3	The Permittee must conduct a cylinder gas audit: Due by the end of each three of four calendar quarters but no more than three quarters in succession. A CGA is not required during any calendar quarter in which a RATA was performed. [40 CFR pt. 60, Appendix F, 5.1.2, Minn. R. 7017.1010, subp. 1(C)]
6.5.4	The Permittee must conduct a relative accuracy test audit: Due one of each four calendar quarters. [40 CFR pt. 60, Appendix F, 5.1.1, Minn. R. 7017.1010, subp. 1(C)]
EQUI 11	**South Unit O2/CO/SO2 Monitor - SO2**
6.6.1	Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter in which a RATA was conducted. [Minn. R. 7017.1180, subp. 3]
6.6.2	Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter in which a CGA was conducted. [Minn. R. 7017.1180, subp. 1]
6.6.3	The Permittee must conduct a cylinder gas audit: Due by the end of each three of four calendar quarters but no more than three quarters in succession. A CGA is not required during any calendar quarter in which a RATA was performed. [40 CFR pt. 60, Appendix F, 5.1.2, Minn. R. 7017.1010, subp. 1(C)]
6.6.4	The Permittee must conduct a relative accuracy test audit: Due one of each four calendar quarters. [40 CFR pt. 60, Appendix F, 5.1.1, Minn. R. 7017.1010, subp. 1(C)]
EQUI 14	**South Unit NOx Monitor**
6.7.1	Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter in which a RATA was conducted. If the Permittee wishes to take credit for operation of the NOX CEMS for the purposes of reporting actual emissions for emission inventory, EQUI 14 must comply with the requirements of this permit during the time credit for operation is taken. [Minn. R. 7017.1180, subp. 3]
6.7.2	Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter in which a CGA was conducted.

Requirement number	Requirement and citation
	If the Permittee wishes to take credit for operation of the NOX CEMS for the purposes of reporting actual emissions for emission inventory, EQUI 14 must comply with the requirements of this permit during the time credit for operation is taken. [Minn. R. 7017.1180, subp. 1]
6.7.3	The Permittee must conduct a cylinder gas audit: Due by the end of each three of four calendar quarters but no more than three quarters in succession. A CGA is not required during any calendar quarter in which a RATA was performed. If the Permittee wishes to take credit for operation of the NOX CEMS for the purposes of reporting actual emissions for emission inventory, EQUI 14 must comply with the requirements of this permit during the time credit for operation is taken. [40 CFR pt. 60, Appendix F, 5.1.2, Minn. R. 7017.1010, subp. 1(C)]
6.7.4	The Permittee must conduct a relative accuracy test audit: Due one of each four calendar quarters. If the Permittee wishes to take credit for operation of the NOX CEMS for the purposes of reporting actual emissions for emission inventory, EQUI 14 must comply with the requirements of this permit during the time credit for operation is taken. [40 CFR pt. 60, Appendix F, 5.1.1, Minn. R. 7017.1010, subp. 1(C)]
EQUI 15	**South Unit Opacity**
6.8.1	The Permittee must conduct quarterly COMS performance audits: Due once per QA operating quarter (calendar quarter in which the unit operates at least 168 hours) after COMS certification test. Quarterly performance audits will include: optical alignment, calibration error, and zero compensation according to Procedure 3 of 40 CFR Pt. 60, Appendix F, section 10.0(2). Sources that achieve quality assured data for four consecutive quarters may reduce their auditing frequency to semi-annual. If a performance audit is failed, the source must resume quarterly testing for that audit requirement until it again demonstrates successful performance over four consecutive quarters. [40 CFR pt. 60, Appendix F, Minn. R. 7017.1010, subp. 1(C)]
6.8.2	The Permittee must perform annual zero alignment as described in Procedure 3, section 10.3 of 40 CFR Pt. 60, Appendix F. [40 CFR pt. 60, Appendix F, Minn. R. 7017.1010, subp. 1(C)]
EQUI 17	**South Unit inlet O2/SO2 - O2**
6.9.1	Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter in which a RATA was conducted. EQUI 17 O2 inlet CEMS is not necessary in order to meet applicable SO2 emission concentration limit. However, if the Permittee wishes to take credit for operation of the SO2 inlet CEMS to meet the applicable 80% reduction of potential sulfur dioxides emissions limit, EQUI 17 must comply with the requirements of this permit during the time credit for operation is taken. [Minn. R. 7017.1180, subp. 3]
6.9.2	Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter in which a CGA was conducted. EQUI 17 O2 inlet CEMS is not necessary in order to meet applicable SO2 emission concentration limit. However, if the Permittee wishes to take credit for operation of the SO2 inlet CEMS to meet the applicable 80% reduction of potential sulfur dioxides emissions limit, EQUI 17 must comply with the requirements of this permit during the time credit for operation is taken. [Minn. R. 7017.1180, subp. 1]
6.9.3	The Permittee must conduct a cylinder gas audit: Due by the end of each three of four calendar quarters but no more than three quarters in succession. A CGA is not required during any calendar

Requirement number	Requirement and citation
	quarter in which a RATA was performed. EQUI 17 O2 inlet CEMS is not necessary in order to meet applicable SO2 emission concentration limit. However, if the Permittee wishes to take credit for operation of the SO2 inlet CEMS to meet the applicable 80% reduction of potential sulfur dioxides emissions limit, EQUI 17 must comply with the requirements of this permit during the time credit for operation is taken. [40 CFR pt. 60, Appendix F, 5.1.2, Minn. R. 7017.1010, subp. 1(C)]
6.9.4	The Permittee must conduct a relative accuracy test audit: Due one of each four calendar quarters. EQUI 17 O2 inlet CEMS is not necessary in order to meet applicable SO2 emission concentration limit. However, if the Permittee wishes to take credit for operation of the SO2 inlet CEMS to meet the applicable 80% reduction of potential sulfur dioxides emissions limit, EQUI 17 must comply with the requirements of this permit during the time credit for operation is taken. [40 CFR pt. 60, Appendix F, 5.1.1, Minn. R. 7017.1010, subp. 1(C)]
EQUI 19	**South Unit inlet O2/SO2 - SO2**
6.10.1	Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter in which a RATA was conducted. EQUI 19 SO2 inlet CEMS is not necessary in order to meet applicable SO2 emission concentration limit. If the Permittee wishes to take credit for operation of the SO2 inlet CEMS to meet the applicable 80% reduction of potential sulfur dioxides limit, EQUI 19 must comply with the requirements of this permit during the time credit for operation is taken. [Minn. R. 7017.1180, subp. 3]
6.10.2	Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter in which a CGA was conducted. EQUI 19 SO2 inlet CEMS is not necessary in order to meet applicable SO2 emission concentration limit. If the Permittee wishes to take credit for operation of the SO2 inlet CEMS to meet the applicable 80% reduction of potential sulfur dioxides limit, EQUI 19 must comply with the requirements of this permit during the time credit for operation is taken. [Minn. R. 7017.1180, subp. 1]
6.10.3	The Permittee must conduct a cylinder gas audit: Due by the end of each three of four calendar quarters but no more than three quarters in succession. A CGA is not required during any calendar quarter in which a RATA was performed. EQUI 19 SO2 inlet CEMS is not necessary in order to meet applicable SO2 emission concentration limit. If the Permittee wishes to take credit for operation of the SO2 inlet CEMS to meet the applicable 80% reduction of potential sulfur dioxides limit, EQUI 19 must comply with the requirements of this permit during the time credit for operation is taken. [40 CFR pt. 60, Appendix F, 5.1.2, Minn. R. 7017.1010, subp. 1(C)]
6.10.4	The Permittee must conduct a relative accuracy test audit: Due one of each four calendar quarters. EQUI 19 SO2 inlet CEMS is not necessary in order to meet applicable SO2 emission concentration limit. If the Permittee wishes to take credit for operation of the SO2 inlet CEMS to meet the applicable 80% reduction of potential sulfur dioxides limit, EQUI 19 must comply with the requirements of this permit during the time credit for operation is taken. [40 CFR pt. 60, Appendix F, 5.1.1, Minn. R. 7017.1010, subp. 1(C)]
EQUI 31	**North Unit O2/CO/SO2 Monitor - O2**
6.11.1	Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter

Requirement number	Requirement and citation
	in which a RATA was conducted. [Minn. R. 7017.1180, subp. 3]
6.11.2	Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter in which a CGA was conducted. [Minn. R. 7017.1180, subp. 1]
6.11.3	The Permittee must conduct a cylinder gas audit: Due by the end of each three of four calendar quarters but no more than three quarters in succession. A CGA is not required during any calendar quarter in which a RATA was performed. [40 CFR pt. 60, Appendix F, 5.1.2, Minn. R. 7017.1010, subp. 1(C)]
6.11.4	The Permittee must conduct a relative accuracy test audit: Due one of each four calendar quarters. [40 CFR pt. 60, Appendix F, 5.1.1, Minn. R. 7017.1010, subp. 1(C)]
EQUI 33	**Auxiliary Boiler w/ FGR and low NOx burners**
6.12.1	Compliance Report: the Permittee must submit a 5-year compliance report: Due January 31, 2031, and every 60 months thereafter. Each annual compliance report must cover the applicable 5-year period from January 1 to December 31 and must be postmarked or submitted no later than January 31. The Permittee must submit the Compliance Report electronically to the EPA via CEDRI using the appropriate electronic report in CEDRI for 40 CFR pt. 63, subp. DDDDD. [40 CFR 63.7550(a)-(b), 40 CFR 63.7550(c)(1), 40 CFR 63.7550(h)(3), 40 CFR pt. 63, subp. DDDDD(Table 9), Minn. R. 7011.7050]
6.12.2	The Permittee shall submit a notification of anticipated date for conducting opacity observations: Due 30 calendar days before Opacity Observation Date. [40 CFR 60.7(a)(6), Minn. R. 7019.0100, subp. 1]
EQUI 35	**South MSW Incinerator**
6.13.1	Particulate Matter: The Permittee must conduct a performance test: Due annually to measure particulate matter (PM) emissions. The Permittee must conduct each annual stack test no later than 12.5 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 14-16, 2024. For federal regulated pollutants, if all stack tests for a given pollutant over 3 consecutive years show compliance with the emission limit, the Permittee is not required to conduct a stack test for that pollutant for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the emission limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. To measure PM for federal regulated pollutants, the Permittee must use Method 1 to determine the sampling location. The Permittee must use Method 5 to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. The minimum sample volume must be 1.0 cubic meters. The probe and filter holder heating systems in the sample train must be set to provide a gas temperature no greater than 160 plus or minus 14 degrees Celsius. The minimum sampling time is 1 hour. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test

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	date. [40 CFR 60.1290, 40 CFR 60.1295(b), 40 CFR 60.1300(a), 40 CFR 60.1305(a), 40 CFR pt. 60, subp. AAAA, Table 5, Minn. R. 7011.1293, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.85, subd. 1]
6.13.2	Particulate Matter: The Permittee must conduct a performance test: Due annually to measure particulate matter (PM) emissions. The Permittee must conduct each annual stack test no later than 12.5 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 14-16, 2024. For state regulated pollutants, if three annual performance tests for a three-year period show compliance with PM emission limits, the Permittee may continue to conduct annual testing, or may choose to conduct performance tests every 2.5 years. At a minimum, a performance test must be conducted every 2.5 years, but no more than 30 months following the previous compliance test. If a performance test indicates noncompliance with applicable standards, the Permittee must resume annual testing for three years for PM emissions. If three annual performance tests for the three-year period show compliance with PM emission limits, the Permittee may again conduct performance testing every 2.5 years. To measure PM for state regulated pollutants, the Permittee must use Method 5, 40 CFR pt. 60, Appendix A-3, as amended, and Method 202, 40 CFR pt. 51, Appendix M, as amended. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [Minn. R. 7011.1265, subp. 1, Minn. R. 7011.1270, subp. 3(A)(2) and (B), Minn. R. 7017.2020, subp. 1]
6.13.3	Mercury: The Permittee must conduct a performance test: Due annually to measure mercury emissions. The Permittee must conduct each annual stack test no later than 12.5 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 14-16, 2024. The facility may implement testing for mercury not less than once every three years or according to federal applicable requirements, whichever is more stringent, under the following conditions: the facility has demonstrated that mercury emissions have been below 50 percent of the facility's permitted long-term limit for three consecutive years. If a facility is granted testing for mercury not less than once every three years or according to federal applicable requirements, whichever is more stringent, and a mercury performance test shows mercury emissions greater than 50 percent of the facility's permitted mercury limit, the facility shall conduct annual mercury stack testing until emissions are below 50 percent of the facility's permitted mercury limit. Once the facility demonstrates that mercury emissions are again below 50 percent of the facility's permitted limit, the facility may resume testing every three years, upon notifying the Commissioner in writing. For federal regulated pollutants, if all stack tests for a given pollutant over 3 consecutive years show compliance with the emission limit, the Permittee is not required to conduct a stack test for that pollutant for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the emission limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3

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	consecutive years show compliance with the emission limit for that pollutant. To measure mercury, the Permittee must use Method 1 to determine the sampling location. The Permittee must use Method 29 to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. Compliance testing must be performed while the municipal waste combustion unit is operating at full load. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 60.1290, 40 CFR 60.1295(b), 40 CFR 60.1300(a), 40 CFR 60.1305(a), 40 CFR pt. 60, subp. AAAA, Table 5, Minn. R. 7011.1265, subp. 1, Minn. R. 7011.1270, subp. 3(A)(2) and (B), Minn. R. 7011.1293, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.85, subd. 1]
6.13.4	Mercury or PCDD/PCDF removal equipment operation. The Permittee shall determine and record the average additive mass feed rate, in pounds-per-hour, during the initial and at each subsequent performance test for mercury or PCDD/PCDF. The Permittee shall correlate this feed rate to an operating parameter of the additive injection system. The Permittee shall submit the calculations supporting the correlation with the results of each mercury or PCDD/PCDF performance test. [Minn. R. 7011.1272, subp. 1]
6.13.5	The maximum demonstrated capacity of EQUI 35 must be determined during each subsequent performance test during which compliance with the PCDD/PCDF emission limit in Minn. R. 7011.1225 is achieved. [Minn. R. 7011.1265, subp. 7]
6.13.6	Muni Waste Combust Organics: The Permittee must conduct a performance test: Due annually to measure Muni Waste Combust Organics (dioxins/furans or PCDD/PCDF) emissions. The Permittee must conduct each annual stack test no later than 12.5 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 14-16, 2024. For state regulated pollutants, if 3 annual performance tests for a three-year period show compliance with dioxin/furan emission limits, the Permittee may continue to conduct annual testing, or may choose to conduct performance tests every 2.5 years. At a minimum, a performance test must be conducted every 2.5 years, but no more than 30 months following the previous compliance test. If a performance test indicates noncompliance with applicable standards, the Permittee must resume annual testing for 3 years for dioxin/furan emissions. If 3 annual performance tests for the 3-year period show compliance with dioxin/furan emission limits, the Permittee may again conduct performance testing every 2.5 years. For federal regulated pollutants, if all stack tests for a given pollutant over 3 consecutive years show compliance with the emission limit, the Permittee is not required to conduct a stack test for that pollutant for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the emission limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. To measure dioxins/furans, the Permittee must use Method 1 to determine the sampling location.

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	The Permittee must use Method 23 to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. The minimum sampling time must be 4 hours per test run while the municipal waste combustion unit is operating at full load. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 60.1290, 40 CFR 60.1295(b), 40 CFR 60.1300(a), 40 CFR 60.1305(b), 40 CFR pt. 62, subp. AAAA, Table 5, Minn. R. 7011.1265, subp. 1, Minn. R. 7011.1270, subp. 3(A)(2) and (B), Minn. R. 7011.1293, Minn. R. 7017.2020, subp. 1]
6.13.7	Hydrogen Chloride: The Permittee must conduct a performance test: Due annually to measure hydrogen chloride (HCl) emissions. The Permittee must conduct each annual stack test no later than 13 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 14-16, 2024. The Permittee may test less often if all stack tests for HCl over 3 consecutive years show compliance with the HCl limit. In this case, the Permittee is not required to conduct a stack test for HCl for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the HCl limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for HCl. To measure HCl, the Permittee must use Method 1 to determine the sampling location. The Permittee must use Method 26 or 26A to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. Test runs must be at least 1 hour long while the municipal waste combustion unit is operating at full load. The Permittee must include the SO2 CEMS data recorded during the time of the performance test as an appendix to the test report. The Permittee must also include chlorine in the ultimate fuel analysis as part of the Waste Composition Study. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 60.1290, 40 CFR 60.1295(b), 40 CFR 60.1300(a), 40 CFR 60.1305(a), 40 CFR pt. 60, subp. AAAA, Table 5, Minn. R. 7011.1293, Minn. R. 7017.2020, subp. 1]
6.13.8	Opacity: The Permittee must conduct a performance test: Due annually to measure opacity. The Permittee must conduct each annual stack test no later than 12.5 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 14-16, 2024.

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	For state regulated pollutants, if three annual performance tests for a three-year period show compliance with opacity limits, the Permittee may continue to conduct annual testing, or may choose to conduct performance tests every 2.5 years. At a minimum, a performance test must be conducted every 2.5 years, but no more than 30 months following the previous compliance test. If a performance test indicates noncompliance with applicable standards, the Permittee must resume annual testing for three years for opacity emissions. If three annual performance tests for the three-year period show compliance with opacity limits, the Permittee may again conduct performance testing every 2.5 years. For federal regulated pollutants, if all stack tests for a given pollutant over 3 consecutive years show compliance with the emission limit, the Permittee is not required to conduct a stack test for that pollutant for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the emission limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 9 to determine the sampling location, pollutant concentration, and compliance with opacity limits, using a 3 hour observation period (thirty 6-min averages). Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 60.1290, 40 CFR 60.1295(b), 40 CFR 60.1300(a), 40 CFR 60.1305(a), 40 CFR pt. 60, subp. AAAA, Table 5, Minn. R. 7011.1265, subp. 1, Minn. R. 7011.1270, subp. 3(A)(2) and (B), Minn. R. 7011.1293, Minn. R. 7017.2020, subp. 1]
6.13.9	Cadmium: The Permittee must conduct performance test: Due annually to measure cadmium emissions. The Permittee must conduct each annual stack test no later than 13 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 14-16, 2024. The Permittee may test less often if all stack tests for cadmium over 3 consecutive years show compliance with the cadmium limit. In this case, the Permittee is not required to conduct a stack test for cadmium for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the cadmium limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for cadmium. To measure cadmium, the Permittee must use Method 1 to determine the sampling location. The Permittee must use Method 29 to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. Compliance testing must be performed while the municipal waste combustion unit is operating at full load. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2.

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	Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 60.1290, 40 CFR 60.1295(b), 40 CFR 60.1300(a), 40 CFR 60.1305(a), 40 CFR pt. 60, subp. AAAA, Table 5, Minn. R. 7011.1293, Minn. R. 7017.2020, subp. 1]
6.13.10	Lead: The Permittee must conduct a performance test: Due annually to measure lead emissions. The Permittee must conduct each annual stack test no later than 13 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 14-16, 2024. The Permittee may test less often if all stack tests for lead over 3 consecutive years show compliance with the lead limit. In this case, the Permittee is not required to conduct a stack test for lead for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the lead limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for lead. To measure lead, the Permittee must use Method 1 to determine the sampling location. The Permittee must use Method 29 to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. Compliance testing must be performed while the municipal waste combustion unit is operating at full load. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 60.1290, 40 CFR 60.1295(b), 40 CFR 60.1300(a), 40 CFR 60.1305(a), 40 CFR pt. 60, subp. AAAA, Table 5, Minn. R. 7011.1293, Minn. R. 7017.2020, subp. 1]
6.13.11	Visible Emissions: The Permittee must conduct a performance test: Due annually for visible emissions from fugitive ash. The Permittee must conduct each annual stack test no later than 13 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 14-16, 2024. The Permittee may test less often if all stack tests for fugitive ash emissions over 3 consecutive years show compliance with the fugitive ash emissions limit. In this case, the Permittee is not required to conduct a stack test for fugitive ash emissions for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the fugitive ash emissions limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for fugitive ash. To measure fugitive ash, the Permittee must use Method 22 (visible emissions). The three 1-hour observation period must include periods when the Permittee transfers fugitive ash from the waste

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	combustion unit to the area where fugitive ash is stored or loaded into containers or trucks. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 60.1290, 40 CFR 60.1295(b), 40 CFR 60.1305(a), 40 CFR 62.1300(a), 40 CFR pt. 60, subp. AAAA, Table 5, Minn. R. 7011.1293, Minn. R. 7017.2020, subp. 1]
6.13.12	The Permittee must submit a performance test report: Due 45 calendar days after Performance Test Date (60 calendar days for dioxin/furan performance test). The reports shall contain the results of performance tests conducted to determine compliance with waste combustor unit emission limits whenever performance testing is conducted. The report shall be submitted according to the conditions of Minn. R. 7017.2035. [Minn. R. 7011.1285, subp. 6, Minn. R. 7017.2035, subp. 1-2]
6.13.13	The Permittee must select a mercury/PCDD/PCDF control additive system operating parameter that can be used to calculate mercury/PCDD/PCDF control additive (additive) feed rate (for example, screw feeder speed). During each PCDD/PCDF and mercury performance test, the Permittee shall determine the average additive feed rate in kilograms (or pounds) per hour and determine the average operating parameter level that correlates to that additive feed rate. The Permittee shall also establish a relationship between the operating parameter and the additive feed rate in order to calculate the additive feed rate based on the operating parameter level. [40 CFR 60.1330(a) and (b), Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1293]
6.13.14	The Permittee must submit a quarterly report: Due quarterly within 30 days after the quarter ending December 30, March 30, June 30, and September 30 of each year. The quarterly report may be submitted as a bound, paper copy or in an alternative format such as computer disk or CD-ROM. The commissioner shall accept the submittal in the alternative format provided that the commissioner has given prior approval for the use of the alternative format in order that compatibility between the software and hardware configurations of the commissioner and the Permittee can be assured. The report shall contain the following items: A. calendar date; B. sulfur dioxide and carbon monoxide emissions, the maximum waste combustor unit load level, and particulate matter control device temperatures as recorded by Minn. R. 7011.1260, subp. 6(C), and the daily maximum opacity reading as recorded by Minn. R. 7011.1260, subp. 6(B)(1). The facility may choose to provide this information in tabular or graphic form. The graphs shall be prepared as follows: (1) the graph shall represent one operating parameter or pollutant; (2) the applicable limit of the parameter or pollutant shall be indicated on the graph; and (3) data shall be expressed in the same units as the applicable operating parameter or emissions limit; C. instances of dumpstack use; D. the identification of operating days when any of the average emission concentrations, percent reductions, operating parameters specified under Minn. R. 7011.1260, subp. 6(C) or Minn. R. 7011.1272, subp. 2, or the opacity level exceeded the applicable limits. The report shall include the emission levels recorded during the exceedance, reasons for such exceedances as well as a description of corrective actions taken;

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	E. the percent of the operating time for the quarter that the opacity CEMS was operating and collecting valid data; F. the identification of operating days for which the minimum number of hours that emission concentrations, percent reductions, operating parameters specified under Minn. R. 7011.1260, subp. 6(C), or Minn. R. 7011.1272, subp. 2, or the opacity level have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken; G. the results of daily sulfur dioxide, nitrogen oxides, and carbon monoxide CEMS drift tests and accuracy assessments as required in Minn. R. 7011.1260, subp. 5; H. the information required in Minn. R. 7011.1285, subp. 2(C), (D), and (E), summarized to reflect quarterly totals; I. a compliance certification as required in Minn. R. 7007.0800, subp. 6(D); and J. if an additive is used to comply with mercury or PCDD/PCDF emission limits, the total additive used during the calendar quarter, as specified in Minn. R. 7011.1272, subp. 3(B), with supporting calculations. [Minn. R. 7011.1285, subp. 3]
6.13.15	The Permittee must submit an annual report: Due annually, by the 1st of February and include the following information: (a) The results of the annual stack test, using appropriate units, for dioxins/furans, cadmium, lead, mercury, opacity, particulate matter, hydrogen chloride, and fugitive ash. (b) A list of the highest average emission levels recorded, in the appropriate units for sulfur dioxide, carbon monoxide, load level of the municipal waste combustion unit, and temperature of the flue gases at the inlet of the particulate matter air pollution control device (4-hour block average). (c) The highest 6-minute opacity level measured. Base this value on all 6-minute average opacity levels recorded by the continuous opacity monitoring system (40 CFR 60.1365(a)(1)). (d) For municipal waste combustion units that use activated carbon or control additive for controlling dioxins/furans or mercury emissions, include four records: (1) The average carbon or control additive feed rates recorded during the most recent dioxins/furans and mercury stack tests. (2) The lowest 8-hour block average carbon or control additive feed rate recorded during the year. (3) The total carbon or control additive purchased and delivered to the municipal waste combustion plant for each calendar quarter. If the Permittee chooses to evaluate total carbon/control additive purchased and delivered on a municipal waste combustion unit basis, record the total carbon/control additive purchased and delivered for each individual municipal waste combustion unit at the plant. (4) The required quarterly carbon/control additive usage of the plant calculated using the appropriate equation in 40 CFR 60.1460(f). If quarterly carbon/control additive usage is evaluated on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit at the plant. (e) The total number of days that the minimum number of hours of data were not obtained for sulfur dioxide, carbon monoxide, load level of the municipal waste combustion unit, temperature of the flue gases at the inlet of the particulate matter air pollution control device, and carbon/control additive feed rate. Include the reasons the data was not obtained and corrective actions taken to obtain the data in the future. (f) The number of hours data was excluded from the calculation of average levels (include the reasons for excluding it) for sulfur dioxide, carbon monoxide, load level of the municipal waste combustion unit, temperature of the flue gases at the inlet of the particulate matter air pollution control device, and carbon feed rate.

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	(g) A notice of intent to begin a reduced stack testing schedule for dioxins/furans emissions during the following calendar year if eligible for alternative scheduling (40 CFR 60.1305(a) or (b)). (h) A notice of intent to begin a reduced stack testing schedule for other pollutants during the following calendar year if eligible for alternative scheduling (40 CFR 60.1305(a)). (i) A summary of any emission or parameter level that did not meet the limits specified in this permit. (j) A summary of the data in 40 CFR 60.1410(a) through (d) from the year preceding the reporting year. (k) If carbon dioxide is chosen to be monitored instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in 40 CFR 60.1255. (l) Documentation of periods when all certified chief facility operators and certified shift supervisors are offsite for more than 12 hours. [40 CFR 60.1385, 40 CFR 60.1410, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1293]
EQUI 36	**North MSW Incinerator**
6.14.1	Mercury or PCDD/PCDF removal equipment operation. The Permittee shall determine and record the average additive mass feed rate, in pounds-per-hour, during each subsequent performance test for mercury or PCDD/PCDF. The Permittee shall correlate this feed rate to an operating parameter of the additive injection system. The Permittee shall submit the calculations supporting the correlation with the results of each mercury or PCDD/PCDF performance test. [Minn. R. 7011.1272, subp. 1]
6.14.2	Particulate Matter: The Permittee must conduct a performance test: Due annually to measure particulate matter (PM) emissions. The Permittee must conduct each annual stack test no later than 12.5 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 2-4, 2023. For state regulated pollutants, if three annual performance tests for a three-year period show compliance with PM emission limits, the Permittee may continue to conduct annual testing, or may choose to conduct performance tests every 2.5 years. At a minimum, a performance test must be conducted every 2.5 years, but no more than 30 months following the previous compliance test. If a performance test indicates noncompliance with applicable standards, the Permittee must resume annual testing for three years for PM emissions. If three annual performance tests for the three-year period show compliance with PM emission limits, the Permittee may again conduct performance testing every 2.5 years. To measure PM for state regulated pollutants, the Permittee must use Method 5, 40 CFR pt. 60, Appendix A-3, as amended, and Method 202, 40 CFR pt. 51, Appendix M, as amended The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [Minn. R. 7011.1265, subp. 1, Minn. R. 7011.1270, subp. 3(A)(2) and (B), Minn. R. 7011.1295, Minn. R. 7017.2020, subp. 1]

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6.14.3	Particulate Matter: The Permittee must conduct a performance test: Due annually to measure particulate matter (PM) emissions. The Permittee must conduct each annual stack test no later than 12.5 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 2-4, 2023. For federal regulated pollutants, if all stack tests for a given pollutant over 3 consecutive years show compliance with the emission limit, the Permittee is not required to conduct a stack test for that pollutant for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the emission limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. To measure PM for federal regulated pollutants, the Permittee must use Method 1 to determine the sampling location. The Permittee must use Method 5 or 29 to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. The minimum sample volume must be 1.0 cubic meters. The probe and filter holder heating systems in the sample train must be set to provide a gas temperature no greater than 160 plus or minus 14 degrees Celsius. The minimum sampling time is 1 hour. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 62.15235, 40 CFR 62.15240(b), 40 CFR 62.15245(a), 40 CFR 62.15250(a), 40 CFR pt. 62, subp. JJJ, Table 8, Minn. R. 7011.1295, Minn. R. 7011.1295, Minn. R. 7017.2020, subp. 1, Minn. R. 7017.2020, subp. 1]
6.14.4	Muni Waste Combust Organics: The Permittee must conduct a performance test: Due annually to measure Muni Waste Combust Organics (dioxins/furans or PCDD/PCDF) emissions. The Permittee must conduct each annual stack test no later than 12.5 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 2-4, 2023. For state regulated pollutants, if 3 annual performance tests for a 3-year period show compliance with PCDD/PCDF emission limits, the Permittee may continue to conduct annual testing, or may choose to conduct performance tests every 2.5 years. At a minimum, a performance test must be conducted every 2.5 years, but no more than 30 months following the previous compliance test. If a performance test indicates noncompliance with applicable standards, the Permittee must resume annual testing for 3 years for PCDD/PCDF emissions. If 3 annual performance tests for the 3-year period show compliance with PCDD/PCDF emission limits, the Permittee may again conduct performance testing every 2.5 years. For federal regulated pollutants, if all stack tests for a given pollutant over 3 consecutive years show compliance with the emission limit, the Permittee is not required to conduct a stack test for that pollutant for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the emission limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission

Requirement number	Requirement and citation
	limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. To measure PCDD/PCDF, the Permittee must use Method 1 to determine the sampling location. The Permittee must use Method 23 to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. The minimum sampling time must be 4 hours per test run while the municipal waste combustion unit is operating at full load. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 62.15235, 40 CFR 62.15240(b), 40 CFR 62.15245(a), 40 CFR 62.15250(a) and (b), 40 CFR pt. 62, subp. JJJ, Table 8, Minn. R. 7011.1265, subp. 1, Minn. R. 7011.1270, subp. 3(A)(2) and (B), Minn. R. 7011.1295, Minn. R. 7017.2020, subp. 1]
6.14.5	Visible Emissions: The Permittee must conduct performance test: Due annually for visible emissions from fugitive ash. The Permittee must conduct each annual stack test no later than 13 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 2-4, 2023. The Permittee may test less often if all stack tests for fugitive ash emissions over 3 consecutive years show compliance with the fugitive ash emissions limit. In this case, the Permittee is not required to conduct a stack test for fugitive ash emissions for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the fugitive ash emissions limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for fugitive ash. To measure fugitive ash, the Permittee must use Method 22 (visible emissions). The three 1-hour observation period must include periods when the Permittee transfers fugitive ash from the waste combustion unit to the area where fugitive ash is stored or loaded into containers or trucks. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 62.15235, 40 CFR 62.15240(b), 40 CFR 62.15245(a), 40 CFR 62.15250(a), 40 CFR pt. 62, subp. JJJ, Table 8, Minn. R. 7011.1295, Minn. R. 7017.2020, subp. 1]
6.14.6	Cadmium: The Permittee must conduct performance test: Due annually to measure cadmium emissions. The Permittee must conduct each annual stack test no later than 13 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 2-4, 2023.

Requirement number	Requirement and citation
	The Permittee may test less often if all stack tests for cadmium over 3 consecutive years show compliance with the cadmium limit. In this case, the Permittee is not required to conduct a stack test for cadmium for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the cadmium limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for cadmium. To measure cadmium, the Permittee must use Method 1 to determine the sampling location. The Permittee must use Method 29 to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. Compliance testing must be performed while the municipal waste combustion unit is operating at full load. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 62.15235, 40 CFR 62.15240(b), 40 CFR 62.15245(a), 40 CFR 62.15250(a), 40 CFR pt. 62, subp. JJJ, Table 8, Minn. R. 7011.1295, Minn. R. 7017.2020, subp. 1]
6.14.7	Lead: The Permittee must conduct a performance test: Due annually to measure lead emissions. The Permittee must conduct each annual stack test no later than 13 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 2-4, 2023. The Permittee may test less often if all stack tests for lead over 3 consecutive years show compliance with the lead limit. In this case, the Permittee is not required to conduct a stack test for lead for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the lead limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for lead. To measure lead, the Permittee must use Method 1 to determine the sampling location. The Permittee must use Method 29 to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. Compliance testing must be performed while the municipal waste combustion unit is operating at full load. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 62.15235, 40 CFR 62.15240(b), 40 CFR 62.15245(a), 40 CFR 62.15250(a), 40 CFR pt. 62,

Requirement number	Requirement and citation
	subp. JJJ, Table 8, Minn. R. 7011.1295, Minn. R. 7017.2020, subp. 1]
6.14.8	Hydrogen Chloride: The Permittee must conduct a performance test: Due annually to measure hydrogen chloride (HCl) emissions. The Permittee must conduct each annual stack test no later than 13 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 2-4, 2023. The Permittee may test less often if all stack tests for HCl over 3 consecutive years show compliance with the HCl limit. In this case, the Permittee is not required to conduct a stack test for HCl for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the HCl limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for HCl. To measure HCl, the Permittee must use Method 1 to determine the sampling location. The Permittee must use Method 26 or 26A to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. Test runs must be at least 1 hour long while the municipal waste combustion unit is operating at full load. The Permittee must include the SO2 CEMS data recorded during the time of the performance test as an appendix to the test report. The Permittee must also include chlorine in the ultimate fuel analysis as part of the Waste Composition Study. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 62.15235, 40 CFR 62.15240(b), 40 CFR 62.15245(a), 40 CFR 62.15250(a), 40 CFR pt. 62, subp. JJJ, Table 8, Minn. R. 7011.1295, Minn. R. 7017.2020, subp. 1]
6.14.9	Opacity: The Permittee must conduct a performance test: Due annually to measure opacity. The Permittee must conduct each annual stack test no later than 12.5 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 2-4, 2023. For state regulated pollutants, if three annual performance tests for a three-year period show compliance with opacity limits, the Permittee may continue to conduct annual testing, or may choose to conduct performance tests every 2.5 years. At a minimum, a performance test must be conducted every 2.5 years, but no more than 30 months following the previous compliance test. If a performance test indicates noncompliance with applicable standards, the Permittee must resume annual testing for three years for opacity emissions. If three annual performance tests for the three-year period show compliance with opacity limits, the Permittee may again conduct performance testing every 2.5 years. For federal regulated pollutants, if all stack tests for a given pollutant over 3 consecutive years show compliance with the emission limit, the Permittee is not required to conduct a stack test for that pollutant for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the emission limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission

Requirement number	Requirement and citation
	limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 9 to determine the sampling location, pollutant concentration, and compliance with opacity limits, using a 3 hour observation period (thirty 6-min averages). Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 62.15235, 40 CFR 62.15240(b), 40 CFR 62.15245(a), 40 CFR 62.15250(a), 40 CFR pt. 62, subp. JJJ, Table 8, Minn. R. 7011.1265, subp. 1, Minn. R. 7011.1270, subp. 3(A)(2) and (B), Minn. R. 7011.1295, Minn. R. 7017.2020, subp. 1]
6.14.10	Mercury: The Permittee must conduct a performance test: Due annually to measure mercury emissions. The Permittee must conduct each annual stack test no later than 12.5 months after the previous stack test. At the time of permit issuance, the previous stack test was conducted on May 2-4, 2023. The facility may implement testing for mercury not less than once every three years or according to federal applicable requirements, whichever is more stringent, under the following conditions: the facility has demonstrated that mercury emissions have been below 50 percent of the facility's permitted long-term limit for three consecutive years. If a facility is granted testing for mercury not less than once every three years or according to federal applicable requirements, whichever is more stringent, and a mercury performance test shows mercury emissions greater than 50 percent of the facility's permitted mercury limit, the facility shall conduct annual mercury stack testing until emissions are below 50 percent of the facility's permitted mercury limit. Once the facility demonstrates that mercury emissions are again below 50 percent of the facility's permitted limit, the facility may resume testing every three years, upon notifying the Commissioner in writing. For federal regulated pollutants, if all stack tests for a given pollutant over 3 consecutive years show compliance with the emission limit, the Permittee is not required to conduct a stack test for that pollutant for the next 2 years. However, the Permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the emission limit. Thereafter, the Permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the Permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. To measure mercury, the Permittee must use Method 1 to determine the sampling location. The Permittee must use Method 29 to measure pollutant concentration and simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B. Compliance testing must be performed while the municipal waste combustion unit is operating at full load. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a follow up compliance letter.

Requirement number	Requirement and citation
	Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 62.15235, 40 CFR 62.15240(b), 40 CFR 62.15245(a), 40 CFR 62.15250(a), 40 CFR pt. 62, subp. JJJ, Table 8, Minn. R. 7011.1265, subp. 1, Minn. R. 7011.1270, subp. 3(A)(2) and (B), Minn. R. 7011.1295, Minn. R. 7017.2020, subp. 1]
6.14.11	The maximum demonstrated capacity of EQUI 36 must be determined during each subsequent performance test during which compliance with the PCDD/PCDF emission limit in Minn. R. 7011.1225 is achieved. [Minn. R. 7011.1265, subp. 7]
6.14.12	The Permittee must submit a performance test report: Due 45 calendar days after Performance Test Date (60 calendar days for dioxin/furan performance test). The reports shall contain the results of performance tests conducted to determine compliance with waste combustor unit emission limits whenever performance testing is conducted. The report shall be submitted according to the conditions of Minn. R. 7017.2035. [Minn. R. 7011.1285, subp. 6, Minn. R. 7017.2035, subp. 1-2]
6.14.13	Particulate matter control; device temperature. The Permittee must determine and record the maximum temperature and the four-hour arithmetic average gas stream temperature as measured at the inlet to each particulate matter control device during each subsequent performance test for PCDD/PCDFs demonstrating compliance with the PCDD/PCDF emission limits in this permit. [Minn. R. 7011.1265, subp. 8]
6.14.14	The Permittee must select a mercury/PCDD/PCDF control additive system operating parameter that can be used to calculate mercury/PCDD/PCDF control additive (additive) feed rate (for example, screw feeder speed). During each PCDD/PCDF (dioxins/furans) and mercury performance test, the Permittee must determine the average additive feed rate in kilograms (or pounds) per hour and determine the average operating parameter level that correlates to that additive feed rate. The Permittee must establish a relationship between the operating parameter and the additive feed rate in order to calculate the additive feed rate based on the operating parameter level. [40 CFR 62.15275(a), 40 CFR 62.15275(b), Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.1295]
6.14.15	The Permittee must submit a quarterly report: Due quarterly within 30 days after the quarter ending December 30, March 30, June 30, and September 30 of each year. The quarterly report may be submitted as a bound, paper copy or in an alternative format such as computer disk or CD-ROM. The commissioner shall accept the submittal in the alternative format provided that the commissioner has given prior approval for the use of the alternative format in order that compatibility between the software and hardware configurations of the commissioner and the Permittee can be assured. The report shall contain the following items: A. calendar date; B. sulfur dioxide and carbon monoxide emissions, the maximum waste combustor unit load level, and particulate matter control device temperatures as recorded by Minn. R. 7011.1260, subp. 6(C), and the daily maximum opacity reading as recorded by Minn. R. 7011.1260, subp. 6(B)(1). The facility may choose to provide this information in tabular or graphic form. The graphs shall be prepared as follows: (1) the graph shall represent one operating parameter or pollutant; (2) the applicable limit of the parameter or pollutant shall be indicated on the graph; and (3) data shall be expressed in the same units as the applicable operating parameter or emissions limit; C. instances of dumpstack use; D. the identification of operating days when any of the average emission concentrations, percent reductions, operating parameters specified under Minn. R. 7011.1260, subp. 6(C) or Minn. R. 7011.1272, subp. 2, or the opacity level exceeded the applicable limits. The report shall include the

Requirement number	Requirement and citation
	emission levels recorded during the exceedance, reasons for such exceedances as well as a description of corrective actions taken; E. the percent of the operating time for the quarter that the opacity CEMS was operating and collecting valid data; F. the identification of operating days for which the minimum number of hours that emission concentrations, percent reductions, operating parameters specified under Minn. R. 7011.1260, subp. 6(C), or Minn. R. 7011.1272, subp. 2, or the opacity level have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken; G. the results of daily sulfur dioxide, nitrogen oxides, and carbon monoxide CEMS drift tests and accuracy assessments as required in Minn. R. 7011.1260, subp. 5; H. the information required in Minn. R. 7011.1285, subp. 2(C), (D), and (E), summarized to reflect quarterly totals; I. a compliance certification as required in Minn. R. 7007.0800, subp. 6(D); and J. if an additive is used to comply with mercury or PCDD/PCDF emission limits, the total additive used during the calendar quarter, as specified in Minn. R. 7011.1272, subp. 3(B), with supporting calculations. [Minn. R. 7011.1285, subp. 3]
6.14.16	The Permittee must submit an annual report: Due annually, by the 1st of February (a) The results of the annual stack test, using appropriate units, for dioxins/furans, cadmium, lead, mercury, opacity, particulate matter, hydrogen chloride, and fugitive ash. (b) A list of the highest average emission levels recorded, in the appropriate units for sulfur dioxide, carbon monoxide, load level of the municipal waste combustion unit, and temperature of the flue gases at the inlet of the particulate matter air pollution control device (4-hour block average). (c) The highest 6-minute opacity level measured. Base this value on all 6-minute average opacity levels recorded by the continuous opacity monitoring system (40 CFR 62.15305(a)(1)). (d) For municipal waste combustion units that use activated carbon for controlling dioxins/furans or mercury emissions, include four records: (1) The average carbon feed rates recorded during the most recent dioxins/furans and mercury stack tests. (2) The lowest 8-hour block average carbon feed rate recorded during the year. (3) The total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If the Permittee chooses to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at the plant. (4) The required quarterly carbon usage of the plant calculated using the appropriate equation in 40 CFR 62.15390(f). If quarterly carbon usage is evaluated on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit at the plant. (e) The total number of days that the minimum number of hours of data were not obtained for sulfur dioxide, carbon monoxide, load level of the municipal waste combustion unit, temperature of the flue gases at the inlet of the particulate matter air pollution control device, and carbon feed rate. Include the reasons the data was not obtained and corrective actions taken to obtain the data in the future. (f) The number of hours data was excluded from the calculation of average levels (include the reasons for excluding it) for sulfur dioxide, carbon monoxide, load level of the municipal waste combustion unit, temperature of the flue gases at the inlet of the particulate matter air pollution control device, and carbon feed rate. (g) A notice of intent to begin a reduced stack testing schedule for dioxins/furans emissions during the following calendar year if eligible for alternative scheduling (40 CFR 62.15250(a) or (b)).

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	(h) A notice of intent to begin a reduced stack testing schedule for other pollutants during the following calendar year if eligible for alternative scheduling (40 CFR 62.15250(a)). (i) A summary of any emission or parameter level that did not meet the limits specified in this permit. (j) A summary of the data in 40 CFR 62.15340(a) through (d) from the year preceding the reporting year. (k) If carbon dioxide is chosen to be monitored instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in 40 CFR 62.15200. (l) Documentation of periods when all certified chief facility operators and certified shift supervisors are offsite for more than 12 hours. [40 CFR 62.15335, 40 CFR 62.15340, Minn. R. 7011.1295]
EQUI 44	**North Unit Opacity**
6.15.1	The Permittee must conduct quarterly COMS performance audits: Due once per QA operating quarter (calendar quarter in which the unit operates at least 168 hours) after COMS certification test. Quarterly performance audits will include: optical alignment, calibration error, and zero compensation according to Procedure 3 of 40 CFR Pt. 60, Appendix F, section 10.0(2). Sources that achieve quality assured data for four consecutive quarters may reduce their auditing frequency to semi-annual. If a performance audit is failed, the source must resume quarterly testing for that audit requirement until it again demonstrates successful performance over four consecutive quarters. [40 CFR pt. 60, Appendix F, Minn. R. 7017.1010, subp. 1(C)]
6.15.2	The Permittee must perform annual zero alignment as described in Procedure 3, section 10.3 of 40 CFR Pt. 60, Appendix F. [40 CFR pt. 60, Appendix F, Minn. R. 7017.1010, subp. 1(C)]

7. Appendices

Appendix A. Insignificant activities and general applicable requirements

The table below lists the insignificant activities that are currently at the Facility and their associated general applicable requirements.

Minn. R.	Rule description of the activity	General applicable requirement
Minn. R. 7007.1300, subp. 3(B)(2)	Indirect heating equipment with a heat input capacity less than 420,000 Btu/hour, etc. *Furnace; 135,000 Btu/hr heat input.*	PM <= 0.4 lb/MMbtu Opacity <= 20% with exceptions (Minn. R. 7011.0515)
Minn. R. 7007.1300, subp. 3(E)	Brazing, soldering, torch-cutting, or welding equipment *Welding equipment.*	PM, variable depending on airflow Opacity <= 20% (Minn. R. 7011.0715)
Minn. R. 7007.1300, subp. 3(F)	Individual units with potential emissions less than 2000 lb/year of certain pollutants *Lime handling and storage, cooling towers, materials recovery facility (MRF), and 15 natural gas space heaters each rated 350,000 Btu/hr or less*	PM, variable depending on airflow Opacity <= 20% (Minn. R. 7011.0715)
Minn. R. 7007.1300, subp. 3(G)	Fugitive dust emissions from unpaved roads and parking lots	Requirement to take reasonable measures to prevent PM from becoming airborne (Minn. R. 7011.0150)

Appendix B. NO_X and $PM_{2.5}$ Modeling Parameters for Permit Number 11100036-004

Appendix B – Table 1: Modeled Parameters, Point Sources

Permit ID	Model ID	Pollutant	Averaging Period	Operating Scenario #	Release Type	Emission Rate (lb/hr)	Emission Rate (g/s)	Exit Temp (K)	Exit Velocity (m/s)
STRU 4	STRU 4	PM_{10}/ $PM_{2.5}$	24-hr, annual	1	POINT	0.6222	0.078395472	377.599	9.2059
STRU 4	STRU 4	NO_X	1-hr, annual	1	POINT	2.6196	0.330062	377.599	9.2059
STRU 5	STRU 5	PM_{10}/ $PM_{2.5}$	24-hr, annual	1	POINT	4.545775	0.572755023	435.928	25.2654
STRU 5	STRU 5	NO_X	1-hr, annual	1	POINT	86.26852	10.86959	435.928	25.2654

Appendix B – Table 2: Modeled Parameters, Point Sources (continued)

Permit ID	Model ID	Release Type	Flow Rate (acfm)	X – Coordinate (m)	Y – Coordinate (m)	Base Elevation (m)	Stack Height (m)	Stack Diameter (m)
STRU 4	STRU 4	POINT	22772.6	303519.200	5162962.200	416.100	27.127	1.2192
STRU 4	STRU 4	POINT	22772.6	303519.200	5162962.200	416.100	27.127	1.2192
STRU 5	STRU 5	POINT	62499.0	303503.922	5162964.682	416.130	38.100	1.2192
STRU 5	STRU 5	POINT	62499.0	303503.922	5162964.682	416.130	38.100	1.2192

STRU 5, Combined MWC Stack, is the combined stack that both the North and South Incinerators vent their exhaust to and was approved in permit action -004. SV001, the previous stack for the North and South Incinerators, was removed from the facility in permit action -004 and is removed from the modeling parameters. A SIL analysis was not performed for NO_2.

In addition to the modeling of the PRRF facility itself, two additional buildings were included in the modeling. Building one has one tier with 4 corners and a height of 15.77 meters. Building 2 has two tiers, one with a height of 7.62 meters and nine corners, and one with a height of 17.83 meters and 14 corners. The coordinates of the corners are given in UTM coordinates (UTM zone 15N).

B2T1 - has 1 tier(s) with a base elevation of 416.08 METERS

Building Name	Tier Number	BLDG-Tier Number	Tier Height	No. of Corners	Corner Coordinates in meters	
					X	Y
B2T1	1	1	15.77	4	303504.50 (0.00)	5162948.90 (0.00)
					303510.20 (5.70)	5162948.90 (0.00)
					303510.20 (5.70)	5162943.60 (-5.30)

					303504.50 (0.00)	5162943.60 (-5.30)

B1T1 – has 2 tier(s) with a base elevation of 416.13 METERS

Building Name	Tier Number	BLDG-Tier Number	Tier Height	No. of Corners	Corner Coordinates in meters	
					X	Y
B1T1	1	3	7.62	14	303520.90 (16.40)	5162972.7 (23.80)
					303520.90 (16.40)	5162980.4 (31.50)
					303511.00 (6.50)	5162980.40 (31.50)
					303511.00 (6.50)	5162967.90 (19.00)
					303501.50 (-3.00)	5162967.90 (19.00)
					303501.50 (-3.00)	5162953.00 (4.10)
					303511.00 (6.50)	5162953.00 (4.10)
					303511.00 (6.50)	5162931.60 (-17.30)
					303530.00 (25.50)	5162931.60 (-17.30)
					303530.00 (25.50)	5162942.40 (-6.50)
					303556.10 (51.60)	5162942.40 (-6.50)
					303556.10 (51.60)	5162961.40 (12.50)
					303540.10 (35.60)	5162961.40 (12.50)
					303540.10 (35.60)	5162972.90 (24.00)

Building Name	Tier Number	BLDG-Tier Number	Tier Height	No. of Corners	Corner Coordinates in meters	
					X	Y
B1T1	2	4	17.83	9	303520.90 (16.40)	5162972.70 (23.80)

					303511.00 (6.50)	5162972.70 (23.80)
					303511.00 (6.50)	5162967.90 (19.00)
					303511.00 (6.50)	5162942.20 (-6.70)
					303549.00 (44.50)	5162942.40 (-6.50)
					303556.10 (51.60)	5162942.40 (-6.50)
					303556.10 (51.60)	5162961.40 (12.50)
					303540.10 (35.60)	5162961.40 (12.50)
					303540.10 (35.60)	5162972.90 (24.00)

Appendix C. 40 CFR pt. 60, Subpart A – General Provisions

§ 60.1 Applicability.

(a) Except as provided in subparts B, Ba, and C of this part, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

(b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

(c) In addition to complying with the provisions of this part, the owner or operator of an affected facility may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution control agency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to Title V of the Clean Air Act (Act) as amended November 15, 1990 (42 U.S.C. 7661). For more information about obtaining an operating permit see part 70 of this chapter.

(d) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.*

(1) This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia (“site”).

(2) Except for compliance with 40 CFR 60.49b(u), the site shall have the option of either complying directly with the requirements of this part, or reducing the site-wide emissions caps in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the site-wide emissions caps in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this part.

(3) Notwithstanding the provisions of paragraph (d)(2) of this section, for any provisions of this part except for Subpart Kb, the owner/operator of the site shall comply with the applicable provisions of this part if the Administrator determines that compliance with the provisions of this part is necessary for achieving the objectives of the regulation and the Administrator notifies the site in accordance with the provisions of the permit issued pursuant to 40 CFR 52.2454.

§ 60.2 Definitions.

The terms used in this part are defined in the Act or in this section as follows:

Act means the Clean Air Act (42 U.S.C. 7401 *et seq.*)

Administrator means the Administrator of the Environmental Protection Agency or his authorized representative.

Affected facility means, with reference to a stationary source, any apparatus to which a standard is applicable.

Alternative method means any method of sampling and analyzing for an air pollutant which is not a reference or equivalent method but which has been demonstrated to the Administrator's satisfaction to, in specific cases, produce results adequate for his determination of compliance.

Approved permit program means a State permit program approved by the Administrator as meeting the requirements of part 70 of this chapter or a Federal permit program established in this chapter pursuant to Title V of the Act (42 U.S.C. 7661).

Capital expenditure means an expenditure for a physical or operational change to an existing facility which exceeds the product of the applicable "annual asset guideline repair allowance percentage" specified in the latest edition of Internal Revenue Service (IRS) Publication 534 and the existing facility's basis, as defined by section 1012 of the Internal Revenue Code. However, the total expenditure for a physical or operational change to an existing facility must not be reduced by any "excluded additions" as defined in IRS Publication 534, as would be done for tax purposes.

Clean coal technology demonstration project means a project using funds appropriated under the heading 'Department of Energy-Clean Coal Technology', up to a total amount of $2,500,000,000 for commercial demonstrations of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency.

Commenced means, with respect to the definition of *new source* in section 111(a)(2) of the Act, that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

Construction means fabrication, erection, or installation of an affected facility.

Continuous monitoring system means the total equipment, required under the emission monitoring sections in applicable subparts, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters.

Electric utility steam generating unit means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

Equivalent method means any method of sampling and analyzing for an air pollutant which has been demonstrated to the Administrator's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specified conditions.

Excess Emissions and Monitoring Systems Performance Report is a report that must be submitted periodically by a source in order to provide data on its compliance with stated emission limits and operating parameters, and on the performance of its monitoring systems.

Existing facility means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type.

Force majeure means, for purposes of § 60.8, an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents the owner or operator from complying with the regulatory requirement to conduct performance tests within the specified timeframe despite the affected facility's best efforts to fulfill the obligation. Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility.

Isokinetic sampling means sampling in which the linear velocity of the gas entering the sampling nozzle is equal to that of the undisturbed gas stream at the sample point.

Issuance of a part 70 permit will occur, if the State is the permitting authority, in accordance with the requirements of part 70 of this chapter and the applicable, approved State permit program. When the EPA is the permitting authority, issuance of a Title V permit occurs immediately after the EPA takes final action on the final permit.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Modification means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

Monitoring device means the total equipment, required under the monitoring of operations sections in applicable subparts, used to measure and record (if applicable) process parameters.

Nitrogen oxides means all oxides of nitrogen except nitrous oxide, as measured by test methods set forth in this part.

One-hour period means any 60-minute period commencing on the hour.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Owner or operator means any person who owns, leases, operates, controls, or supervises an affected facility or a stationary source of which an affected facility is a part.

Part 70 permit means any permit issued, renewed, or revised pursuant to part 70 of this chapter.

Particulate matter means any finely divided solid or liquid material, other than uncombined water, as measured by the reference methods specified under each applicable subpart, or an equivalent or alternative method.

Permit program means a comprehensive State operating permit system established pursuant to title V of the Act (42 U.S.C. 7661) and regulations codified in part 70 of this chapter and applicable State regulations, or a comprehensive Federal operating permit system established pursuant to title V of the Act and regulations codified in this chapter.

Permitting authority means:

(1) The State air pollution control agency, local agency, other State agency, or other agency authorized by the Administrator to carry out a permit program under part 70 of this chapter; or

(2) The Administrator, in the case of EPA-implemented permit programs under title V of the Act (42 U.S.C. 7661).

Proportional sampling means sampling at a rate that produces a constant ratio of sampling rate to stack gas flow rate.

Reactivation of a very clean coal-fired electric utility steam generating unit means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

(1) Has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;

(2) Was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

(3) Is equipped with low-NO_X burners prior to the time of commencement of operations following reactivation; and

(4) Is otherwise in compliance with the requirements of the Clean Air Act.

Reference method means any method of sampling and analyzing for an air pollutant as specified in the applicable subpart.

Repowering means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in

consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990. Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

Run means the net period of time during which an emission sample is collected. Unless otherwise specified, a run may be either intermittent or continuous within the limits of good engineering practice.

Shutdown means the cessation of operation of an affected facility for any purpose.

Six-minute period means any one of the 10 equal parts of a one-hour period.

Standard means a standard of performance proposed or promulgated under this part.

Standard conditions means a temperature of 293 K (68F) and a pressure of 101.3 kilopascals (29.92 in Hg).

Startup means the setting in operation of an affected facility for any purpose.

State means all non-Federal authorities, including local agencies, interstate associations, and State-wide programs, that have delegated authority to implement:

(1) The provisions of this part; and/or

(2) the permit program established under part 70 of this chapter. The term State shall have its conventional meaning where clear from the context.

Stationary source means any building, structure, facility, or installation which emits or may emit any air pollutant.

Title V permit means any permit issued, renewed, or revised pursuant to Federal or State regulations established to implement title V of the Act (42 U.S.C. 7661). A title V permit issued by a State permitting authority is called a part 70 permit in this part.

Volatile Organic Compound means any organic compound which participates in atmospheric photochemical reactions; or which is measured by a reference method, an equivalent method, an alternative method, or which is determined by procedures specified under any subpart.

§ 60.3 Units and abbreviations.

Used in this part are abbreviations and symbols of units of measure. These are defined as follows:

(a) System International (SI) units of measure:

A—ampere

g—gram

Hz—hertz

J—joule

K—degree Kelvin

kg—kilogram

m—meter

m^3—cubic meter

mg—milligram—10^{-3} gram

mm—millimeter—10^{-3} meter

Mg—megagram—10^6 gram

mol—mole

N—newton

ng—nanogram—10^{-9} gram

nm—nanometer—10^{-9} meter

Pa—pascal

s—second

V—volt

W—watt

Ω—ohm

µg—microgram—10^{-6} gram

(b) Other units of measure:

Btu—British thermal unit

°C—degree Celsius (centigrade)

cal—calorie

cfm—cubic feet per minute

cu ft—cubic feet

dcf—dry cubic feet

dcm—dry cubic meter

dscf—dry cubic feet at standard conditions

dscm—dry cubic meter at standard conditions

eq—equivalent

°F—degree Fahrenheit

ft—feet

gal—gallon

gr—grain

g-eq—gram equivalent

hr—hour

in—inch

k—1,000

l—liter

lpm—liter per minute

lb—pound

meq—milliequivalent

min—minute

ml—milliliter

mol. wt.—molecular weight

ppb—parts per billion

ppm—parts per million

psia—pounds per square inch absolute

psig—pounds per square inch gage

°R—degree Rankine

scf—cubic feet at standard conditions

scfh—cubic feet per hour at standard conditions

scm—cubic meter at standard conditions

sec—second

sq ft—square feet

std—at standard conditions

(c) Chemical nomenclature:

CdS—cadmium sulfide

CO—carbon monoxide

CO_2—carbon dioxide

HCl—hydrochloric acid

Hg—mercury

H_2O—water

H_2S—hydrogen sulfide

H_2SO_4—sulfuric acid

N_2—nitrogen

NO—nitric oxide

NO_2—nitrogen dioxide

NO_x—nitrogen oxides

O_2—oxygen

SO_2—sulfur dioxide

SO_3—sulfur trioxide

SO_x—sulfur oxides

(d) Miscellaneous:

A.S.T.M.—American Society for Testing and Materials

§ 60.4 Address.

(a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted in duplicate to the appropriate Regional Office of the U.S. Environmental Protection Agency to the attention of the Director of the Division indicated in the following list of EPA Regional Offices.

Region I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont) Director, Enforcement and Compliance Assurance Division, U.S. EPA Region I, 5 Post Office Square—Suite 100 (04-2), Boston, MA 02109-3912, Attn: Air Compliance Clerk.

Region II (New Jersey, New York, Puerto Rico, Virgin Islands), Director, Air and Waste Management Division, U.S. Environmental Protection Agency, Federal Office Building, 26 Federal Plaza (Foley Square), New York, NY 10278.

Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia), Director, Air Protection Division, Mail Code 3AP00, 1650 Arch Street, Philadelphia, PA 19103-2029.

Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee), Director, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, 61 Forsyth St. SW., Suite 9T43, Atlanta, Georgia 30303-8960.

Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin), Director, Air and Radiation Division, U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, IL 60604-3590.

Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, Texas); Director; Enforcement and Compliance Assurance Division; U.S. Environmental Protection Agency, 1201 Elm Street, Suite 500, Mail Code 6ECD, Dallas, Texas 75270-2102.

Region VII (Iowa, Kansas, Missouri, Nebraska), Director, Air and Waste Management Division, 11201 Renner Boulevard, Lenexa, Kansas 66219.

Region VIII (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming) Director, Air and Toxics Technical Enforcement Program, Office of Enforcement, Compliance and Environmental Justice, Mail Code 8ENF-AT, 1595 Wynkoop Street, Denver, CO 80202-1129.

Region IX (Arizona, California, Hawaii and Nevada; the territories of American Samoa and Guam; the Commonwealth of the Northern Mariana Islands; the territories of Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Atoll, Palmyra Atoll, and Wake Islands; and certain U.S. Government activities in the freely associated states of the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau): Director, Enforcement and Compliance Assurance Division (ENF 2-1), U.S. Environmental Protection Agency Region IX, 75 Hawthorne Street, San Francisco, CA 94105.

Region X (Alaska, Oregon, Idaho, Washington), Director, Air and Waste Management Division, U.S. Environmental Protection Agency, 1200 Sixth Avenue, Seattle, WA 98101.

(b) Section 111(c) directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards of performance for new stationary sources located in such State. All information required to be submitted to EPA under paragraph (a) of this section, must also be submitted to the appropriate State Agency of any State to which this authority has been delegated (provided, that each specific delegation may except sources from a certain Federal or State reporting requirement). The appropriate mailing address for those States whose delegation request has been approved is as follows:

(1) [Reserved]

(2) State of Alabama: Alabama Department of Environmental Management, P.O. Box 301463, Montgomery, Alabama 36130-1463.

(3) State of Alaska, Department of Environmental Conservation, Pouch O, Juneau, AK 99811.

(4) Arizona:

Arizona Department of Environmental Quality, Suite #160, 1110 West Washington Street, Phoenix, AZ 85007.

Maricopa County Air Quality Department, 301 West Jefferson Street, Phoenix, AZ 85003.

Pima County Department of Environmental Quality, 33 North Stone Avenue, Suite 700, Tucson, AZ 85701.

Pinal County Air Quality Department, 31 North Pinal Street, Building F, Florence, AZ 85132.

Note 1 to paragraph (b)(4):

For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(5) State of Arkansas: Chief, Division of Air Pollution Control, Arkansas Department of Pollution Control and Ecology, 8001 National Drive, P.O. Box 9583, Little Rock, AR 72209.

(6) California:

Amador Air District, 810 Court Street, Jackson, CA 95642.

Antelope Valley Air Quality Management District, 2551 W Avenue H, Lancaster, CA 93536.

Bay Area Air Quality Management District, 375 Beale Street, Suite 600, San Francisco, CA 94105.

Butte County Air Quality Management District, 629 Entler Avenue, Suite 15, Chico, CA 95928.

Calaveras County Air Pollution Control District, 891 Mountain Ranch Road, Building E, San Andreas, CA 95249.

Colusa County Air Pollution Control District, 100 Sunrise Blvd., Suite A, Colusa, CA 95932-3246.

El Dorado County Air Quality Management District, 330 Fair Lane, Placerville, CA 95667-4100.

Eastern Kern Air Pollution Control District, 2700 “M” Street, Suite 302, Bakersfield, CA 93301-2370.

Feather River Air Quality Management District, 541 Washington Avenue, Yuba City, CA 95991.

Glenn County Air Pollution Control District, 720 N Colusa Street, P.O. Box 351, Willows, CA 95988-0351.

Great Basin Unified Air Pollution Control District, 157 Short Street, Bishop, CA 93514-3537.

Imperial County Air Pollution Control District, 150 South Ninth Street, El Centro, CA 92243-2839.

Lake County Air Quality Management District, 2617 S Main St., Lakeport, CA 95453-5405.

Lassen County Air Pollution Control District, 720 South St., Susanville, CA 96130.

Mariposa County Air Pollution Control District, P.O. Box 5, Mariposa, CA 95338.

Mendocino County Air Quality Management District, 306 E Gobbi Street, Ukiah, CA 95482-5511.

Modoc County Air Pollution Control District, 202 W 4th Street, Alturas, CA 96101.

Mojave Desert Air Quality Management District, 14306 Park Avenue, Victorville, CA 92392-2310.

Monterey Bay Air Resources District, 24580 Silver Cloud Court, Monterey, CA 93940.

North Coast Unified Air Quality Management District, 707 L Street, Eureka, CA 95501-3327.

Northern Sierra Air Quality Management District, 200 Litton Drive, Suite 320, Grass Valley, CA 95945-2509.

Northern Sonoma County Air Pollution Control District, 150 Matheson Street, Healdsburg, CA 95448-4908.

Placer County Air Pollution Control District, 110 Maple Street, Auburn, CA 95603.

Sacramento Metropolitan Air Quality Management District, 777 12th Street, Suite 300, Sacramento, CA 95814-1908.

San Diego County Air Pollution Control District, 10124 Old Grove Road, San Diego, CA 92131-1649.

San Joaquin Valley Air Pollution Control District, 1990 E Gettysburg, Fresno, CA 93726.

San Luis Obispo County Air Pollution Control District, 3433 Roberto Court, San Luis Obispo, CA 93401-7126.

Santa Barbara County Air Pollution Control District, 260 North San Antonio Road, Suite A, Santa Barbara, CA 93110-1315.

Shasta County Air Quality Management District, 1855 Placer Street, Suite 101, Redding, CA 96001-1759.

Siskiyou County Air Pollution Control District, 525 So. Foothill Drive, Yreka, CA 96097-3036.

South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, CA 91765-4182.

Tehama County Air Pollution Control District, P.O. Box 1169 (1834 Walnut Street), Red Bluff, CA 96080-0038.

Tuolumne County Air Pollution Control District, 2 South Green St., Sonora, CA 95370-4618.

Ventura County Air Pollution Control District, 4567 Telephone Road, 2nd Floor, Ventura, CA 93003-5417.

Yolo-Solano Air Quality Management District, 1947 Galileo Court, Suite 103, Davis, CA 95618.

Note 2 to paragraph (b)(6):

For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(7) State of Colorado, Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver, CO 80222-1530.

Note:

For a table listing Region VIII's NSPS delegation status, see paragraph (c) of this section.

(8) State of Connecticut, Compliance Analysis and Coordination Unit, Bureau of Air Management, Department of Energy and Environmental Protection, 79 Elm Street, 5th Floor, Hartford, CT 06106-5127.

(9) State of Delaware, Department of Natural Resources & Environmental Control, 89 Kings Highway, P.O. Box 1401, Dover, Delaware 19903.

(10) District of Columbia, Department of Public Health, Air Quality Division, 51 N Street, NE., Washington, DC 20002.

(11) State of Florida: Florida Department of Environmental Protection, Division of Air Resources Management, 2600 Blair Stone Road, MS 5500, Tallahassee, Florida 32399-2400.

(12) State of Georgia: Georgia Department of Natural Resources, Environmental Protection Division, Air Protection Branch, 4244 International Parkway, Suite 120, Atlanta, Georgia 30354.

(13) Hawaii:

Clean Air Branch, Hawaii Department of Health, 2827 Waimano Home Road, #130 Pearl City, HI 96782.

Note 4 to paragraph (b)(13):

For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(14) State of Idaho, Department of Health and Welfare, Statehouse, Boise, ID 83701.

(15) State of Illinois: Illinois Environmental Protection Agency, 1021 North Grand Avenue East, Springfield, Illinois 62794.

(16) State of Indiana: Indiana Department of Environmental Management, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(17) State of Iowa: Iowa Department of Natural Resources, Environmental Protection Division, Air Quality Bureau, 7900 Hickman Road, Suite 1, Urbandale, IA 50322.

(18) State of Kansas: Kansas Department of Health and Environment, Bureau of Air and Radiation, 1000 S.W. Jackson, Suite 310, Topeka, KS 66612-1366.

(19) Commonwealth of Kentucky: Kentucky Department for Environmental Protection, Division for Air Quality, 300 Sower Boulevard, 2nd Floor, Frankfort, Kentucky 40601 or local agency, Louisville Metro Air Pollution Control District, 701 W. Ormsby Ave., Suite 303, Louisville, Kentucky 40203.

(20) State of Louisiana: Louisiana Department of Environmental Quality, P.O. Box 4301, Baton Rouge, Louisiana 70821-4301.

Note:

For a list of delegated standards for Louisiana (excluding Indian country), see paragraph (e)(2) of this section.

(21) State of Maine, Maine Department of Environmental Protection, Bureau of Air Quality, 17 State House Station, Augusta, ME 04333-0017.

(22) State of Maryland, Department of the Environment, 1800 Washington Boulevard, Suite 705, Baltimore, Maryland 21230.

(23) Commonwealth of Massachusetts, Massachusetts Department of Environmental Protection, Division of Air and Climate Programs, One Winter Street, Boston, MA 02108.

(24) State of Michigan: Michigan Department of Natural Resources and Environment, Air Quality Division, P.O. Box 30028, Lansing, Michigan 48909.

(25) State of Minnesota: Minnesota Pollution Control Agency, Division of Air Quality, 520 Lafayette Road North, St. Paul, Minnesota 55155.

(26) State of Mississippi: Hand Deliver or Courier: Mississippi Department of Environmental Quality, Office of Pollution Control, Air Division, 515 East Amite Street, Jackson, Mississippi 39201, Mailing Address: Mississippi Department of Environmental Quality, Office of Pollution Control, Air Division, P.O. Box 2261, Jackson, Mississippi 39225.

(27) State of Missouri: Missouri Department of Natural Resources, Division of Environmental Quality, P.O. Box 176, Jefferson City, MO 65102.

(28) State of Montana, Department of Environmental Quality, 1520 E. 6th Ave., PO Box 200901, Helena, MT 59620-0901.

Note:

For a table listing Region VIII's NSPS delegation status, see paragraph (c) of this section.

(29) State of Nebraska, Nebraska Department of Environmental Control, P.O. Box 94877, State House Station, Lincoln, NE 68509.

Lincoln-Lancaster County Health Department, Division of Environmental Health, 2200 St. Marys Avenue, Lincoln, NE 68502

(30) Nevada:

Nevada Division of Environmental Protection, 901 South Stewart Street, Suite 4001, Carson City, NV 89701-5249.

Clark County Division of Air Quality, 500 S Grand Central Parkway, 1st Floor, P.O. Box 555210, Las Vegas, NV 89155-5210.

Northern Nevada Public Health, Air Quality Management Division, 1001 E 9th Street, Building B, Reno, NV 89512.

Note 7 to paragraph (b)(30):

For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(31) State of New Hampshire, New Hampshire Department of Environmental Services, Air Resources Division, 29 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095.

(32) State of New Jersey: New Jersey Department of Environmental Protection, Division of Environmental Quality, Enforcement Element, John Fitch Plaza, CN-027, Trenton, NJ 08625.

(1) The following table lists the specific source and pollutant categories that have been delegated to the states in Region II. The (X) symbol is used to indicate each category that has been delegated.

	Subpart	State			
		New Jersey	New York	Puerto Rico	Virgin Islands
D	Fossil-Fuel Fired Steam Generators for Which Construction Commenced After August 17, 1971 (Steam Generators and Lignite Fired Steam Generators)	X	X	X	X
Da	Electric Utility Steam Generating Units for Which Construction Commenced After September 18, 1978	X		X	
Db	Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
E	Incinerators	X	X	X	X
F	Portland Cement Plants	X	X	X	X
G	Nitric Acid Plants	X	X	X	X
H	Sulfuric Acid Plants	X	X	X	X
I	Asphalt Concrete Plants	X	X	X	X
J	Petroleum Refineries—(All Categories)	X	X	X	X
K	Storage Vessels for Petroleum Liquids Constructed After June 11, 1973, and prior to May 19, 1978	X	X	X	X
Ka	Storage Vessels for Petroleum Liquids Constructed After May 18, 1978	X	X	X	
L	Secondary Lead Smelters	X	X	X	X
M	Secondary Brass and Bronze Ingot Production Plants	X	X	X	X
N	Iron and Steel Plants	X	X	X	X
O	Sewage Treatment Plants	X	X	X	X
P	Primary Copper Smelters	X	X	X	X
Q	Primary Zinc Smelters	X	X	X	X
R	Primary Lead Smelters	X	X	X	X
S	Primary Aluminum Reduction Plants	X	X	X	X

	Subpart	State			
		New Jersey	New York	Puerto Rico	Virgin Islands
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X	X	X	X
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X	X	X	X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X	X	X	X
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X	X	X	X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate	X	X	X	X
Y	Coal Preparation Plants	X	X	X	X
Z	Ferroally Production Facilities	X	X	X	X
AA	Steel Plants: Electric Arc Furnaces	X	X	X	X
AAa	Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in Steel Plants	X	X	X	
BB	Kraft Pulp Mills	X	X	X	
CC	Glass Manufacturing Plants	X	X	X	
DD	Grain Elevators	X	X	X	
EE	Surface Coating of Metal Furniture	X	X	X	
GG	Stationary Gas Turbines	X	X	X	
HH	Lime Plants	X	X	X	
KK	Lead Acid Battery Manufacturing Plants	X	X		
LL	Metallic Mineral Processing Plants	X	X	X	
MM	Automobile and Light-Duty Truck Surface Coating Operations	X	X		
NN	Phosphate Rock Plants	X	X		
PP	Ammonium Sulfate Manufacturing Plants	X	X		
QQ	Graphic Art Industry Publication Rotogravure Printing	X	X	X	X
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X	X	X	
SS	Industrial Surface Coating: Large Appliances	X	X	X	
TT	Metal Coil Surface Coating	X	X	X	
UU	Asphalt Processing and Asphalt Roofing Manufacture	X	X	X	
VV	Equipment Leaks of Volatile Organic Compounds in Synthetic Organic Chemical	X		X	

	Subpart	State			
		New Jersey	New York	Puerto Rico	Virgin Islands
	Manufacturing Industry				
WW	Beverage Can Surface Coating Industry	X	X	X	
XX	Bulk Gasoline Terminals	X	X	X	
FFF	Flexible Vinyl and Urethane Coating and Printing	X	X	X	
GGG	Equipment Leaks of VOC in Petroleum Refineries	X		X	
HHH	Synthetic Fiber Production Facilities	X		X	
JJJ	Petroleum Dry Clearners	X	X	X	
KKK	Equipment Leaks of VOC from Onshore Natural Gas Processing Plants				
LLL	Onshore Natural Gas Processing Plants; SO_2 Emissions		X		
OOO	Nonmetallic Mineral Processing Plants		X	X	
PPP	Wool Fiberglass Insulation Manufacturing Plants		X	X	

(33) State of New Mexico: New Mexico Environment Department, P.O. Box 5469, Santa Fe, New Mexico 87502-5469. Note: For a list of delegated standards for New Mexico (excluding Bernalillo County and Indian country), see paragraph (e)(1) of this section.

(34) New York: New York State Department of Environmental Conservation, 50 Wolf Road Albany, New York 12233, attention: Division of Air Resources.

(35) State of North Carolina: North Carolina Department of Environmental Quality, Division of Air Quality, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641 or local agencies, Forsyth County Office of Environmental Assistance and Protection, 201 North Chestnut Street, Winston-Salem, North Carolina 27101-4120; Mecklenburg County Land Use and Environmental Services Agency, Air Quality, 2145 Suttle Avenue, Charlotte, North Carolina 28208; Western North Carolina Regional Air Quality Agency, 125 S. Lexington Ave., Suite 101, Asheville, North Carolina 28801-3661.

(36) State of North Dakota, North Dakota Department of Environmental Quality, 918 East Divide Avenue, Bismarck, ND 58501-1947.

Note:

For a table listing Region VIII's NSPS delegation status, see paragraph (c) of this section.

(37) State of Ohio:

(i) Medina, Summit and Portage Counties; Director, Akron Regional Air Quality Management District, 146 South High Street, Room 904, Akron, OH 44308.

(ii) Stark County; Director, Canton City Health Department, Air Pollution Control Division, 420 Market Avenue North, Canton, Ohio 44702-1544.

(iii) Butler, Clermont, Hamilton, and Warren Counties; Director, Hamilton County Department of Environmental Services, 250 William Howard Taft Road, Cincinnati, Ohio 45219-2660.

(iv) Cuyahoga County; Commissioner, Cleveland Department of Public Health, Division of Air Quality, 75 Erieview Plaza 2nd Floor, Cleveland, Ohio 44114.

(v) Clark, Darke, Greene, Miami, Montgomery, and Preble Counties; Director, Regional Air Pollution Control Agency, 117 South Main Street, Dayton, Ohio 45422-1280.

(vi) Lucas County and the City of Rossford (in Wood County); Director, City of Toledo, Division of Environmental Services, 348 South Erie Street, Toledo, OH 43604.

(vii) Adams, Brown, Lawrence, and Scioto Counties; Portsmouth Local Air Agency, 605 Washington Street, Third Floor, Portsmouth, OH 45662.

(viii) Allen, Ashland, Auglaize, Crawford, Defiance, Erie, Fulton, Hancock, Hardin, Henry, Huron, Marion, Mercer, Ottawa, Paulding, Putnam, Richland, Sandusky, Seneca, Van Wert Williams, Wood (Except City of Rossford), and Wyandot Counties; Ohio Environmental Protection Agency, Northwest District Office, Air Pollution Control, 347 North Dunbridge Road, Bowling Green, Ohio 43402.

(ix) Ashtabula, Caroll, Colombiana, Holmes, Lorain, and Wayne Counties; Ohio Environmental Protection Agency, Northeast District Office, Air Pollution Unit, 2110 East Aurora Road, Twinsburg, OH 44087.

(x) Athens, Belmont, Coshocton, Gallia, Guemsey, Harrison, Hocking, Jackson, Jefferson, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Pike, Ross, Tuscarawas, Vinton, and Washington Counties; Ohio Environmental Protection Agency, Southeast District Office, Air Pollution Unit, 2195 Front Street, Logan, OH 43138.

(xi) Champaign, Clinton, Highland, Logan, and Shelby Counties; Ohio Environmental Protection Agency, Southwest District Office, Air Pollution Unit, 401 East Fifth Street, Dayton, Ohio 45402-2911.

(xii) Delaware, Fairfield, Fayette, Franklin, Knox, Licking, Madison, Morrow, Pickaway, and Union Counties; Ohio Environmental Protection Agency, Central District Office, Air Pollution control, 50 West Town Street, Suite 700, Columbus, Ohio 43215.

(xiii) Geauga and Lake Counties; Lake County General Health District, Air Pollution Control, 33 Mill Street, Painesville, OH 44077.

(xiv) Mahoning and Trumbull Counties; Mahoning-Trumbull Air Pollution Control Agency, 345 Oak Hill Avenue, Suite 200, Youngstown, OH 44502.

(38) State of Oklahoma, Oklahoma State Department of Health, Air Quality Service, P.O. Box 53551, Oklahoma City, OK 73152.

(i) Oklahoma City and County: Director, Oklahoma City-County Health Department, 921 Northeast 23rd Street, Oklahoma City, OK 73105.

(ii) Tulsa County: Tulsa City-County Health Department, 4616 East Fifteenth Street, Tulsa, OK 74112.

(39) State of Oregon.

(i) Oregon Department of Environmental Quality (ODEQ), 811 SW Sixth Avenue, Portland, OR 97204-1390, *http://www.deq.state.or.us.*

(ii) Lane Regional Air Pollution Authority (LRAPA), 1010 Main Street, Springfield, Oregon 97477, *http://www.lrapa.org.*

(40)

(i) City of Philadelphia, Department of Public Health, Air Management Services, 321 University Avenue, Philadelphia, Pennsylvania 19104.

(ii) Commonwealth of Pennsylvania, Department of Environmental Protection, Bureau of Air Quality Control, P.O. Box 8468, 400 Market Street, Harrisburg, Pennsylvania 17105.

(iii) Allegheny County Health Department, Bureau of Environmental Quality, Division of Air Quality, 301 39th Street, Pittsburgh, Pennsylvania 15201.

(41) State of Rhode Island, Rhode Island Department of Environmental Management, Office of Air Resources, 235 Promenade Street, Providence, RI 02908.

(42) State of South Carolina: South Carolina Department of Health and Environmental Control, 2600 Bull Street, Columbia, South Carolina 29201.

(43) State of South Dakota, Air Quality Program, Department of Agriculture and Natural Resources, Joe Foss Building, 523 East Capitol, Pierre, SD 57501-3181.

(44) State of Tennessee: Tennessee Department of Environment and Conservation, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 15th Floor, Nashville, Tennessee 37243, or local agencies, Knox County Air Quality Management—Department of Public Health, 140 Dameron Avenue, Knoxville, Tennessee 37917; Metro Public Health Department, Pollution Control Division, 2500 Charlotte Ave., Nashville, Tennessee 37209; Chattanooga-Hamilton County Air Pollution Control Bureau, 6125 Preservation Drive, Chattanooga, Tennessee 37416; Shelby County Health Department, Pollution Control Section, 814 Jefferson Avenue, Memphis, Tennessee 38105.

(45) State of Texas, Texas Air Control Board, 6330 Highway 290 East, Austin, TX 78723.

(46) State of Utah, Division of Air Quality, Department of Environmental Quality, P.O. Box 144820, Salt Lake City, UT 84114-4820.

Note:

For a table listing Region VIII's NSPS delegation status, see paragraph (c) of this section.

(47) State of Vermont, Agency of Natural Resources, Department of Environmental Conservation, Air Quality and Climate Division, Davis 2, One National Life Drive, Montpelier, VT 05620-3802.

(48) Commonwealth of Virginia, Department of Environmental Quality, 629 East Main Street, Richmond, Virginia 23219.

(49) *State of Washington.*

(i) Washington State Department of Ecology (Ecology), P.O. Box 47600, Olympia, WA 98504-7600, *http://www.ecy.wa.gov/*

(ii) Benton Clean Air Authority (BCAA), 650 George Washington Way, Richland, WA 99352-4289, *http://www.bcaa.net/*

(iii) Northwest Air Pollution Control Authority (NWAPA), 1600 South Second St., Mount Vernon, WA 98273-5202, *http://www.nwair.org/*

(iv) Olympic Regional Clean Air Agency (ORCAA), 909 Sleater-Kinney Road S.E., Suite 1, Lacey, WA 98503-1128, *http://www.orcaa.org/*

(v) Puget Sound Clean Air Agency (PSCAA), 110 Union Street, Suite 500, Seattle, WA 98101-2038, *http://www.pscleanair.org/*

(vi) Spokane County Air Pollution Control Authority (SCAPCA), West 1101 College, Suite 403, Spokane, WA 99201, *http://www.scapca.org/*

(vii) Southwest Clean Air Agency (SWCAA), 1308 NE. 134th St., Vancouver, WA 98685-2747, *http://www.swcleanair.org/*

(viii) Yakima Regional Clean Air Authority (YRCAA), 6 South 2nd Street, Suite 1016, Yakima, WA 98901, *http://co.yakima.wa.us/cleanair/default.htm*

(ix) The following table lists the delegation status of the New Source Performance Standards for the State of Washington. An "X" indicates the subpart has been delegated, subject to all the conditions and limitations set forth in Federal law and the letters granting delegation. Some authorities cannot be delegated and are retained by EPA. Refer to the letters granting delegation for a discussion of these retained authorities. The dates noted at the end of the table indicate the effective dates of Federal rules that have been delegated. Authority for implementing and enforcing any amendments made to these rules after these effective dates are not delegated.

NSPS Subparts Delegated to Washington Air Agencies

Subpart[1]	Washington							
	Ecology[2]	BCAA[3]	NWAPA[4]	ORCAA[5]	PSCAA[6]	SCAPCA[7]	SWCAA[8]	YRCAA[9]
A General Provisions	X	X	X	X	X	X	X	X
B Adoption and Submittal of State Plans for Designated Facilities								
C Emission Guidelines and Compliance Times								
Cb Large Municipal Waste Combustors that are Constructed on or before September 20, 1994 (Emission Guidelines and Compliance Times)								
Cc Municipal Solid Waste Landfills (Emission Guidelines and Compliance Times)								
Cd Sulfuric Acid Production Units (Emission Guidelines and Compliance Times)								
Ce Hospital/Medical/Infectious Waste Incinerators (Emission Guidelines and Compliance Times)								
D Fossil-Fuel-Fired Steam Generators for which Construction is Commenced after August 17, 1971	X	X	X	X	X	X	X	X
Da Electric Utility Steam Generating Units for which Construction is Commenced after September 18, 1978	X	X	X	X	X	X	X	X
Db Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X	X	X	X	X
Dc Small Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X	X	X	X	X
E Incinerators	X	X	X	X	X	X	X	X

NSPS Subparts Delegated to Washington Air Agencies								
Subpart[1]	Washington							
	Ecology[2]	BCAA[3]	NWAPA[4]	ORCAA[5]	PSCAA[6]	SCAPCA[7]	SWCAA[8]	YRCAA[9]
Ea Municipal Waste Combustors for which Construction is Commenced after December 20, 1989 and on or before September 20, 1994	X	X	X	X	X	X	X	X
Eb—Large Municipal Waste Combustors		X		X	X	X		
Ec—Hospital/Medical/Infectious Waste Incinerators	X	X	X	X	X	X		
F Portland Cement Plants	X	X	X	X	X	X	X	X
G Nitric Acid Plants	X	X	X	X	X	X	X	X
H Sulfuric Acid Plants	X	X	X	X	X	X	X	X
I Hot Mix Asphalt Facilities	X	X	X	X	X	X	X	X
J Petroleum Refineries	X	X	X	X	X	X	X	X
K Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after June 11, 1973 and prior to May 19, 1978	X	X	X	X	X	X	X	X
Ka Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after May 18, 1978 and prior to July 23, 1984	X	X	X	X	X	X	X	X
Kb VOC Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984	X	X	X	X	X	X	X	X
L Secondary Lead Smelters	X	X	X	X	X	X	X	X
M Secondary Brass and Bronze Production Plants	X	X	X	X	X	X	X	X
N Primary Emissions from Basic Oxygen Process Furnaces for which Construction is Commenced after June 11, 1973	X	X	X	X	X	X	X	X
Na Secondary Emissions from Basic Oxygen Process Steel-making Facilities for which Construction is Commenced after January 20, 1983	X	X	X	X	X	X	X	X
O Sewage Treatment Plants	X	X	X	X	X	X	X	X
P Primary Copper Smelters	X	X	X	X	X	X	X	X

NSPS Subparts Delegated to Washington Air Agencies								
Subpart[1]	Washington							
	Ecology[2]	BCAA[3]	NWAPA[4]	ORCAA[5]	PSCAA[6]	SCAPCA[7]	SWCAA[8]	YRCAA[9]
Q Primary Zinc Smelters	X	X	X	X	X	X	X	X
R Primary Lead Smelters	X	X	X	X	X	X	X	X
S Primary Aluminum Reduction Plants[10]	X							
T Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X	X	X	X	X	X	X	X
U Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X	X	X	X	X	X	X	X
V Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X	X	X	X	X	X	X	X
W Phosphate Fertilizer Industry: Triple Superphosphate Plants	X	X	X	X	X	X	X	X
X Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X	X	X	X	X	X	X	X
Y Coal Preparation Plants	X	X	X	X	X	X	X	X
Z Ferroalloy Production Facilities	X	X	X	X	X	X	X	X
AA Steel Plants: Electric Arc Furnaces Constructed after October 21, 1974 and on or before August 17, 1983	X	X	X	X	X	X	X	X
AAa Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed after August 7, 1983	X	X	X	X	X	X	X	X
BB Kraft Pulp Mills[11]	X							
CC Glass Manufacturing Plants	X	X	X	X	X	X	X	X
DD Grain Elevators	X	X	X	X	X	X	X	X
EE Surface Coating of Metal Furniture	X	X	X	X	X	X	X	X
GG Stationary Gas Turbines	X	X	X	X	X	X	X	X
HH Lime Manufacturing Plants	X	X	X	X	X	X	X	X
KK Lead-Acid Battery Manufacturing Plants	X	X	X	X	X	X	X	X
LL Metallic Mineral Processing Plants	X	X	X	X	X	X	X	X
MM Automobile and Light Duty Truck Surface Coating	X	X	X	X	X	X	X	X

NSPS Subparts Delegated to Washington Air Agencies								
Subpart[1]	Washington							
	Ecology[2]	BCAA[3]	NWAPA[4]	ORCAA[5]	PSCAA[6]	SCAPCA[7]	SWCAA[8]	YRCAA[9]
Operations								
NN Phosphate Rock Plants	X	X	X	X	X	X	X	X
PP Ammonium Sulfate Manufacture	X	X	X	X	X	X	X	X
QQ Graphic Arts Industry: Publication Rotogravure Printing	X	X	X	X	X	X	X	X
RR Pressure Sensitive Tape and Label Surface Coating Standards	X	X	X	X	X	X	X	X
SS Industrial Surface Coating: Large Appliances	X	X	X	X	X	X	X	X
TT Metal Coil Surface Coating	X	X	X	X	X	X	X	X
UU Asphalt Processing and Asphalt Roof Manufacture	X	X	X	X	X	X	X	X
VV Equipment Leaks of VOC in Synthetic Organic Chemical Manufacturing Industry	X	X	X	X	X	X	X	X
WW Beverage Can Surface Coating Industry	X	X	X	X	X	X	X	X
XX Bulk Gasoline Terminals	X	X	X	X	X	X	X	X
AAA New Residential Wood Heaters								
BBB Rubber Tire Manufacturing Industry	X	X	X	X	X	X	X	X
DDD VOC Emissions from Polymer Manufacturing Industry	X	X	X	X	X	X	X	X
FFF Flexible Vinyl and Urethane Coating and Printing	X	X	X	X	X	X	X	X
GGG Equipment Leaks of VOC in Petroleum Refineries	X	X	X	X	X	X	X	X
HHH Synthetic Fiber Production Facilities	X	X	X	X	X	X	X	X
III VOC Emissions from Synthetic Organic Chemical Manufacturing Industry Air Oxidation Unit Processes	X	X	X	X	X	X	X	X
JJJ Petroleum Dry Cleaners	X	X	X	X	X	X	X	X
KKK Equipment Leaks of VOC from Onshore Natural Gas Processing Plants	X	X	X	X	X	X	X	X
LLL Onshore Natural Gas Processing: SO_2 Emissions	X	X	X	X	X	X	X	X
NNN VOC Emissions from Synthetic Organic Chemical	X	X	X	X	X	X	X	X

NSPS Subparts Delegated to Washington Air Agencies								
Subpart[1]	Washington							
	Ecology[2]	BCAA[3]	NWAPA[4]	ORCAA[5]	PSCAA[6]	SCAPCA[7]	SWCAA[8]	YRCAA[9]
Manufacturing Industry Distillation Operations								
OOO Nonmetallic Mineral Processing Plants			X		X		X	
PPP Wool Fiberglass Insulation Manufacturing Plants	X	X	X	X	X	X	X	X
QQQ VOC Emissions from Petroleum Refinery Wastewater Systems	X	X	X	X	X	X	X	X
RRR VOCs from Synthetic Organic Chemical Manufacturing Industry Reactor Processes	X	X	X	X	X	X	X	X
SSS Magnetic Tape Coating Facilities	X	X	X	X	X	X	X	X
TTT Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	X	X	X	X	X	X	X	X
UUU Calciners and Dryers in Mineral Industries	X	X	X	X	X	X	X	X
VVV Polymeric Coating of Supporting Substrates Facilities	X	X	X	X	X	X	X	X
WWW Municipal Solid Waste Landfills	X	X	X	X	X	X	X	X
AAAA Small Municipal Waste Combustion Units for which Construction is Commenced after August 30, 1999 or for which Modification or Reconstruction is Commenced after June 6, 2001	X	X		X	X	X		X
BBBB Small Municipal Waste Combustion Units Constructed on or before August 30, 1999 (Emission Guidelines and Compliance Times)								
CCCC Commercial and Industrial Solid Waste Incineration Units for which Construction is Commenced after November, 30, 1999 or for which Modification or Reconstruction is Commenced on or after June 1, 2001	X	X		X	X	X		X
DDDD Commercial and Industrial Solid Waste Incineration Units that Commenced Construction on or before November 30, 1999 (Emission Guidelines and Compliance Times)								
[1] Any authority within any subpart of this part that is not delegable, is not delegated. Please refer to Attachment B to the delegation letters for a listing of the NSPS authorities excluded from delegation.								
[2] Washington State Department of Ecology, for 40 CFR 60.17(h)(1), (h)(2), (h)(3) and 40 CFR part 60, subpart AAAA, as in								

NSPS Subparts Delegated to Washington Air Agencies								
Subpart[1]	Washington							
	Ecology[2]	BCAA[3]	NWAPA[4]	ORCAA[5]	PSCAA[6]	SCAPCA[7]	SWCAA[8]	YRCAA[9]

effect on June 6, 2001; for 40 CFR part 60, subpart CCCC, as in effect on June 1, 2001; and for all other NSPS delegated, as in effect February 20, 2001.

[3] Benton Clean Air Authority, for 40 CFR 60.17(h)(1), (h)(2), (h)(3) and 40 CFR part 60, subpart AAAA, as in effect on June 6, 2001; for 40 CFR part 60, subpart CCCC, as in effect on June 1, 2001; and for all other NSPS delegated, as in effect February 20, 2001.

[4] Northwest Air Pollution Authority, for all NSPS delegated, as in effect on July 1, 2000.

[5] Olympic Regional Clean Air Authority, for 40 CFR 60.17(h)(1), (h)(2), (h)(3) and 40 CFR part 60, subpart AAAA, as in effect on June 6, 2001; for 40 CFR part 60, subpart CCCC, as in effect on June 1, 2001; and for all other NSPS delegated, as in effect February 20, 2001.

[6] Puget Sound Clean Air Authority, for all NSPS delegated, as in effect on July 1, 2002.

[7] Spokane County Air Pollution Control Authority, for 40 CFR 60.17(h)(1), (h)(2), (h)(3) and 40 CFR part 60, subpart AAAA, as in effect on June 6, 2001; for 40 CFR part 60, subpart CCCC, as in effect on June 1, 2001; and for all other NSPS delegated, as in effect February 20, 2001.

[8] Southwest Clean Air Agency, for all NSPS delegated, as in effect on July 1, 2000.

[9] Yakima Regional Clean Air Authority, for 40 CFR 60.17(h)(1), (h)(2), (h)(3) and 40 CFR part 60, subpart AAAA, as in effect on June 6, 2001; for 40 CFR part 60, subpart CCCC, as in effect on June 1, 2001; and for all other NSPS delegated, as in effect February 20, 2001.

[10] Subpart S of this part is not delegated to local agencies in Washington because the Washington State Department of Ecology retains sole authority to regulate Primary Aluminum Plants, pursuant to Washington Administrative Code 173-415-010.

[11] Subpart BB of this part is not delegated to local agencies in Washington because the Washington State Department of Ecology retains sole authority to regulate Kraft and Sulfite Pulping Mills, pursuant to Washington State Administrative Code 173-405-012 and 173-410-012.

(50) State of West Virginia, Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE., Charleston, West Virginia 25304.

(51) State of Wisconsin: Wisconsin Department of Natural Resouces, 101 South Webster St., P.O. Box 7921, Madison, Wisconsin 53707-7921.

(52) State of Wyoming, Department of Environmental Quality, Air Quality Division, Herschler Building, 122 West 25th Street, Cheyenne, WY 82002.

Note:

For a table listing Region VIII's NSPS delegation status, see paragraph (c) of this section.

(53) Territory of Guam: Guam Environmental Protection Agency, P.O. Box 22439 GMF, Barrigada, Guam 96921.

Note:

For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(54) Commonwealth of Puerto Rico: Commonwealth of Puerto Rico Environmental Quality Board, P.O. Box 11488, Santurce, PR 00910, Attention: Air Quality Area Director (see table under § 60.4(b)(FF)(1)).

(55) U.S. Virgin Islands: U.S. Virgin Islands Department of Conservation and Cultural Affairs, P.O. Box 578, Charlotte Amalie, St. Thomas, VI 00801.

(56) American Samoa: American Samoa Environmental Protection Agency, P.O. Box PPA, Pago Pago, American Samoa 96799.

Note:

For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(57) Commonwealth of the Northern Mariana Islands: CNMI Division of Environmental Quality, P.O. Box 501304, Saipan, MP 96950.

Note:

For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(c) The delegation status table for New Source Performance Standards for Region VIII can be found online at *http://www2.epa.gov/region8/air-program.*

(d) The following tables list the specific part 60 standards that have been delegated unchanged to the air pollution control agencies in Region IX. The (X) symbol is used to indicate each standard that has been delegated. The following provisions of this subpart are not delegated: §§ 60.4(b), 60.8(b), 60.9, 60.11(b), 60.11(e), 60.13(a), 60.13(d)(2), 60.13(g), 60.13(i).

(1) *Arizona.* The following table identifies delegations for Arizona:

Table 3 to Paragraph (d)(1)—Delegation Status for New Source Performance Standards for Arizona

	Subpart	Air pollution control agency			
		Arizona DEQ	Maricopa County	Pima County	Pinal County
A	General Provisions	X	X	X	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X	X	X	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X	X	X	X
Db	Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
Dc	Small Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
E	Incinerators	X	X	X	X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	X	X	X	X
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994	X	X	X	
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996	X	X	X	

Table 3 to Paragraph (d)(1)—Delegation Status for New Source Performance Standards for Arizona					
	Subpart	Air pollution control agency			
		Arizona DEQ	Maricopa County	Pima County	Pinal County
F	Portland Cement Plants	X		X	X
G	Nitric Acid Plants	X	X	X	X
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011		X	X	
H	Sulfuric Acid Plant	X	X	X	X
I	Hot Mix Asphalt Facilities	X	X	X	X
J	Petroleum Refineries	X		X	X
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007			X	
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X	X	X	X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X	X	X	X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X	X	X	X
L	Secondary Lead Smelters	X		X	X
M	Secondary Brass and Bronze Production Plants	X	X	X	X
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X	X	X	X
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	X	X	X	X
O	Sewage Treatment Plants	X	X	X	X
P	Primary Copper Smelters	X		X	X
Q	Primary Zinc Smelters	X		X	X
R	Primary Lead Smelters	X		X	X
S	Primary Aluminum Reduction Plants	X	X	X	X
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X	X	X	X

Table 3 to Paragraph (d)(1)—Delegation Status for New Source Performance Standards for Arizona					
	Subpart	Air pollution control agency			
		Arizona DEQ	Maricopa County	Pima County	Pinal County
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X	X	X	X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X	X	X	X
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X	X	X	X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X	X	X	X
Y	Coal Preparation and Processing Plants	X	X	X	X
Z	Ferroalloy Production Facilities	X	X	X	X
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X	X	X	X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X	X	X	X
BB	Kraft Pulp Mills	X	X	X	X
BBa	Kraft Pulp Mill Sources for which Construction, Reconstruction or Modification Commenced after May 23, 2013		X	X	
CC	Glass Manufacturing Plants	X	X	X	X
DD	Grain Elevators	X	X	X	X
EE	Surface Coating of Metal Furniture	X	X	X	X
FF	(Reserved)				
GG	Stationary Gas Turbines	X	X	X	X
HH	Lime Manufacturing Plants	X	X	X	X
KK	Lead-Acid Battery Manufacturing Plants	X	X	X	X
LL	Metallic Mineral Processing Plants	X	X	X	X
MM	Automobile and Light Duty Trucks Surface Coating Operations	X	X	X	X
NN	Phosphate Rock Plants	X	X	X	X
PP	Ammonium Sulfate Manufacture	X	X	X	X
QQ	Graphic Arts Industry: Publication Rotogravure Printing	X	X	X	X
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X	X	X	X

Table 3 to Paragraph (d)(1)—Delegation Status for New Source Performance Standards for Arizona					
	Subpart	Air pollution control agency			
		Arizona DEQ	Maricopa County	Pima County	Pinal County
SS	Industrial Surface Coating: Large Appliances	X	X	X	X
TT	Metal Coil Surface Coating	X	X	X	X
UU	Asphalt Processing and Asphalt Roofing Manufacture	X	X	X	X
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing	X	X	X	X
VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006	X	X	X	
WW	Beverage Can Surface Coating Industry	X	X	X	X
XX	Bulk Gasoline Terminals	X	X	X	X
AAA	New Residential Wood Heaters	X	X	X	X
BBB	Rubber Tire Manufacturing Industry	X	X	X	X
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	X	X	X	X
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing	X	X	X	X
GGG	Equipment Leaks of VOC in Petroleum Refineries	X		X	X
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006	X		X	
HHH	Synthetic Fiber Production Facilities	X	X	X	X
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	X	X	X	X
JJJ	Petroleum Dry Cleaners	X	X	X	X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	X	X	X	X
LLL	Onshore Natural Gas Processing: SO_2 Emissions	X	X	X	X
MMM	(Reserved)				

Table 3 to Paragraph (d)(1)—Delegation Status for New Source Performance Standards for Arizona					
	Subpart	Air pollution control agency			
		Arizona DEQ	Maricopa County	Pima County	Pinal County
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X	X	X	X
OOO	Nonmetallic Mineral Processing Plants	X	X	X	X
PPP	Wool Fiberglass Insulation Manufacturing Plants	X	X	X	X
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	X		X	X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	X	X	X	
SSS	Magnetic Tape Coating Facilities	X	X	X	X
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	X	X	X	X
UUU	Calciners and Dryers in Mineral Industries	X	X	X	
VVV	Polymeric Coating of Supporting Substrates Facilities	X	X	X	X
WWW	Municipal Solid Waste Landfills	X	X	X	
XXX	Municipal Solid Waste Landfills that Commenced Construction, Reconstruction, or Modification After July 17, 2014		X	X	
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commended After June 6, 2001	X	X	X	
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001	X	X	X	
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006	X	X	X	
GGGG	(Reserved)				
HHHH	(Reserved)				
IIII	Stationary Compression Ignition Internal Combustion Engines	X	X	X	
JJJJ	Stationary Spark Ignition Internal Combustion Engines		X	X	
KKKK	Stationary Combustion Turbines	X	X	X	
LLLL	New Sewage Sludge Incineration Units			X	

Table 3 to Paragraph (d)(1)—Delegation Status for New Source Performance Standards for Arizona

	Subpart	Air pollution control agency			
		Arizona DEQ	Maricopa County	Pima County	Pinal County
MMMM	Emissions Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units	X			
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution		X	X	
OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After September 18, 2015		X	X	
QQQQ	Standards of Performance for New Residential Hydronic Heaters and Forced-Air Furnaces		X	X	
TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units		X	X	

(2) *California.* The following tables identify delegations for each of the local air pollution control agencies of California.

(i) Delegations for Amador County Air Pollution Control District, Antelope Valley Air Quality Management District, Bay Area Air Quality Management District, and Butte County Air Quality Management District are shown in the following table:

Table 4 to Paragraph (d)(2)(i)—Delegation Status for New Source Performance Standards for Amador County APCD, Antelope Valley AQMD, Bay Area AQMD, and Butte County AQMD

	Subpart	Air pollution control agency			
		Amador County APCD	Antelope Valley AQMD	Bay Area AQMD	Butte County AQMD
A	General Provisions		X		
Ba	Adoption and Submittal of State Plans for Designated Facilities		X		
Cf	Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills		X		
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971		X	X	
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978		X	X	
Db	Industrial-Commercial-Institutional Steam Generating Units		X	X	
Dc	Small Industrial-Commercial-Institutional Steam Generating Units		X	X	
E	Incinerators		X	X	
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or		X	X	

Table 4 to Paragraph (d)(2)(i)—Delegation Status for New Source Performance Standards for Amador County APCD, Antelope Valley AQMD, Bay Area AQMD, and Butte County AQMD

	Subpart	Air pollution control agency			
		Amador County APCD	Antelope Valley AQMD	Bay Area AQMD	Butte County AQMD
	Before September 20, 1994				
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994		X		
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996		X		
F	Portland Cement Plants		X	X	
G	Nitric Acid Plants		X	X	
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011		X		
H	Sulfuric Acid Plant		X	X	
I	Hot Mix Asphalt Facilities		X	X	
J	Petroleum Refineries		X	X	
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007		X		
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978		X	X	
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984		X	X	
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984		X	X	
L	Secondary Lead Smelters		X	X	
M	Secondary Brass and Bronze Production Plants		X	X	
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973		X	X	
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983		X	X	
O	Sewage Treatment Plants		X	X	
P	Primary Copper Smelters		X	X	

Table 4 to Paragraph (d)(2)(i)—Delegation Status for New Source Performance Standards for Amador County APCD, Antelope Valley AQMD, Bay Area AQMD, and Butte County AQMD

	Subpart	Air pollution control agency			
		Amador County APCD	Antelope Valley AQMD	Bay Area AQMD	Butte County AQMD
Q	Primary Zinc Smelters		X	X	
R	Primary Lead Smelters		X	X	
S	Primary Aluminum Reduction Plants		X	X	
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants		X		
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants		X	X	
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants		X	X	
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants		X	X	
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities		X	X	
Y	Coal Preparation and Processing Plants		X	X	
Z	Ferroalloy Production Facilities		X	X	
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983		X	X	
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983		X	X	
BB	Kraft Pulp Mills		X	X	
BBa	Kraft Pulp Mill Sources for which Construction, Reconstruction or Modification Commenced after May 23, 2013		X		
CC	Glass Manufacturing Plants		X	X	
DD	Grain Elevators		X	X	
EE	Surface Coating of Metal Furniture		X	X	
FF	(Reserved)				
GG	Stationary Gas Turbines		X	X	
HH	Lime Manufacturing Plants		X	X	
KK	Lead-Acid Battery Manufacturing Plants		X	X	
LL	Metallic Mineral Processing Plants		X	X	

Table 4 to Paragraph (d)(2)(i)—Delegation Status for New Source Performance Standards for Amador County APCD, Antelope Valley AQMD, Bay Area AQMD, and Butte County AQMD

	Subpart	Air pollution control agency			
		Amador County APCD	Antelope Valley AQMD	Bay Area AQMD	Butte County AQMD
MM	Automobile and Light Duty Trucks Surface Coating Operations		X	X	
NN	Phosphate Rock Plants		X	X	
PP	Ammonium Sulfate Manufacture		X	X	
QQ	Graphic Arts Industry: Publication Rotogravure Printing		X	X	
RR	Pressure Sensitive Tape and Label Surface Coating Operations		X	X	
SS	Industrial Surface Coating: Large Appliances		X	X	
TT	Metal Coil Surface Coating		X	X	
UU	Asphalt Processing and Asphalt Roofing Manufacture		X	X	
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing		X	X	
VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006		X		
WW	Beverage Can Surface Coating Industry		X	X	
XX	Bulk Gasoline Terminals				
AAA	New Residential Wood Heaters		X	X	
BBB	Rubber Tire Manufacturing Industry		X	X	
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry		X	X	
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing		X	X	
GGG	Equipment Leaks of VOC in Petroleum Refineries		X	X	
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006		X		
HHH	Synthetic Fiber Production Facilities		X	X	

Table 4 to Paragraph (d)(2)(i)—Delegation Status for New Source Performance Standards for Amador County APCD, Antelope Valley AQMD, Bay Area AQMD, and Butte County AQMD

	Subpart	Air pollution control agency			
		Amador County APCD	Antelope Valley AQMD	Bay Area AQMD	Butte County AQMD
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes		X		
JJJ	Petroleum Dry Cleaners		X	X	
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants		X	X	
LLL	Onshore Natural Gas Processing: SO_2 Emissions		X		
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations		X	X	
OOO	Nonmetallic Mineral Processing Plants		X	X	
PPP	Wool Fiberglass Insulation Manufacturing Plants		X	X	
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems		X		
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes		X		
SSS	Magnetic Tape Coating Facilities		X	X	
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines		X	X	
UUU	Calciners and Dryers in Mineral Industries		X	X	
VVV	Polymeric Coating of Supporting Substrates Facilities		X	X	
WWW	Municipal Solid Waste Landfills		X		
XXX	Municipal Solid Waste Landfills that Commenced Construction, Reconstruction, or Modification After July 17, 2014		X		
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commended After June 6, 2001		X		
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001		X		
DDDD	Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units		X		

Table 4 to Paragraph (d)(2)(i)—Delegation Status for New Source Performance Standards for Amador County APCD, Antelope Valley AQMD, Bay Area AQMD, and Butte County AQMD

	Subpart	Air pollution control agency			
		Amador County APCD	Antelope Valley AQMD	Bay Area AQMD	Butte County AQMD
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006		X		
GGGG	(Reserved)				
HHHH	(Reserved)				
IIII	Stationary Compression Ignition Internal Combustion Engines		X		
JJJJ	Stationary Spark Ignition Internal Combustion Engines		X		
KKKK	Stationary Combustion Turbines		X		
LLLL	New Sewage Sludge Incineration Units		X		
MMMM	Emissions Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units		X		
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution		X		
OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After September 18, 2015		X		
TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units		X		
UUUUa	Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units		X		

(ii) [Reserved]

(iii) Delegations for Glenn County Air Pollution Control District, Great Basin Unified Air Pollution Control District, Imperial County Air Pollution Control District, and Kern County Air Pollution Control District are shown in the following table:

Delegation Status for New Source Performance Standards for Glenn County APCD, Great Basin Unified APCD, Imperial County APCD, and Kern County APCD

	Subpart	Air pollution control agency			
		Glenn County APCD	Great Basin Unified APCD	Imperial County APCD	Kern County APCD

Delegation Status for New Source Performance Standards for Glenn County APCD, Great Basin Unified APCD, Imperial County APCD, and Kern County APCD

	Subpart	Air pollution control agency			
		Glenn County APCD	Great Basin Unified APCD	Imperial County APCD	Kern County APCD
A	General Provisions		X		X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971		X		X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978		X		X
Db	Industrial-Commercial-Institutional Steam Generating Units		X		X
Dc	Small Industrial Steam Generating Units		X		X
E	Incinerators		X		X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994		X		
Eb	Municipal Waste Combustors Constructed After September 20, 1994				
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996				
F	Portland Cement Plants		X		X
G	Nitric Acid Plants		X		X
H	Sulfuric Acid Plants		X		
I	Hot Mix Asphalt Facilities		X		X
J	Petroleum Refineries		X		X
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978		X		X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984		X		X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984		X		X
L	Secondary Lead Smelters		X		X
M	Secondary Brass and Bronze Production Plants		X		X

Delegation Status for New Source Performance Standards for Glenn County APCD, Great Basin Unified APCD, Imperial County APCD, and Kern County APCD

	Subpart	Air pollution control agency			
		Glenn County APCD	Great Basin Unified APCD	Imperial County APCD	Kern County APCD
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973		X		X
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983		X		X
O	Sewage Treatment Plants		X		X
P	Primary Copper Smelters		X		X
Q	Primary Zinc Smelters		X		X
R	Primary Lead Smelters		X		X
S	Primary Aluminum Reduction Plants		X		X
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants		X		X
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants		X		X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants		X		X
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants		X		X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities		X		X
Y	Coal Preparation Plants		X		X
Z	Ferroalloy Production Facilities		X		X
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983		X		X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983		X		X
BB	Kraft pulp Mills		X		X
CC	Glass Manufacturing Plants		X		X
DD	Grain Elevators		X		X
EE	Surface Coating of Metal Furniture		X		X
FF	(Reserved)				

Delegation Status for New Source Performance Standards for Glenn County APCD, Great Basin Unified APCD, Imperial County APCD, and Kern County APCD

	Subpart	Air pollution control agency			
		Glenn County APCD	Great Basin Unified APCD	Imperial County APCD	Kern County APCD
GG	Stationary Gas Turbines		X		X
HH	Lime Manufacturing Plants		X		X
KK	Lead-Acid Battery Manufacturing Plants		X		X
LL	Metallic Mineral Processing Plants		X		X
MM	Automobile and Light Duty Trucks Surface Coating Operations		X		X
NN	Phosphate Rock Plants		X		X
PP	Ammonium Sulfate Manufacture		X		X
QQ	Graphic Arts Industry: Publication Rotogravure Printing		X		X
RR	Pressure Sensitive Tape and Label Surface Coating Operations		X		X
SS	Industrial Surface Coating: Large Appliances		X		X
TT	Metal Coil Surface Coating		X		X
UU	Asphalt Processing and Asphalt Roofing Manufacture		X		X
VV	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry		X		X
WW	Beverage Can Surface Coating Industry		X		X
XX	Bulk Gasoline Terminals				
AAA	New Residential Wool Heaters		X		X
BBB	Rubber Tire Manufacturing Industry		X		X
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry		X		X
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing		X		X
GGG	Equipment Leaks of VOC in Petroleum Refineries		X		X
HHH	Synthetic Fiber Production Facilities		X		X

Delegation Status for New Source Performance Standards for Glenn County APCD, Great Basin Unified APCD, Imperial County APCD, and Kern County APCD

	Subpart	Air pollution control agency			
		Glenn County APCD	Great Basin Unified APCD	Imperial County APCD	Kern County APCD
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes		X		X
JJJ	Petroleum Dry Cleaners		X		X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants		X		X
LLL	Onshore Natural Gas Processing: SO2 Emissions				X
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations		X		X
OOO	Nonmetallic Mineral Processing Plants		X		X
PPP	Wool Fiberglass Insulation Manufacturing Plants		X		X
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems		X		X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes				X
SSS	Magnetic Tape Coating Facilities		X		X
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines		X	X	
UUU	Calciners and Dryers in Mineral Industries		X		X
VVV	Polymeric Coating of Supporting Substrates Facilities		X		X
WWW	Municipal Solid Waste Landfills				X

(iv) Delegations for Lake County Air Quality Management District, Lassen County Air Pollution Control District, Mariposa County Air Pollution Control District, and Mendocino County Air Pollution Control District are shown in the following table:

Delegation Status for New Source Performance Standards for Lake County Air Quality Management District, Lassen County Air Pollution Control District, Mariposa County Air Pollution Control District, and Mendocino County Air Pollution Control District

	Subpart	Air pollution control agency

		Lake County AQMD	Lassen County APCD	Mariposa County AQMD	Mendocino County AQMD
A	General Provisions	X			X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X			X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X			X
Db	Industrial-Commercial-Institutional Steam Generating Units	X			
Dc	Small Industrial Steam Generating Units	X			X
E	Incinerators	X			X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	X			X
Eb	Municipal Waste Combustors Constructed After September 20, 1994				
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996				
F	Portland Cement Plants	X			X
G	Nitric Acid Plants	X			X
H	Sulfuric Acid Plants	X			X
I	Hot Mix Asphalt Facilities	X			X
J	Petroleum Refineries	X			X
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X			X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X			X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X			X
L	Secondary Lead Smelters	X			X
M	Secondary Brass and Bronze Production Plants	X			X
N	Primary Emissions from Basic Oxygen Process Furnaces for	X			X

Delegation Status for New Source Performance Standards for Lake County Air Quality Management District, Lassen County Air Pollution Control District, Mariposa County Air Pollution Control District, and Mendocino County Air Pollution Control District

	Subpart	Air pollution control agency			
		Lake County AQMD	Lassen County APCD	Mariposa County AQMD	Mendocino County AQMD
	Which Construction is Commenced After June 11, 1973				
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	X			X
O	Sewage Treatment Plants	X			X
P	Primary Copper Smelters	X			X
Q	Primary Zinc Smelters	X			X
R	Primary Lead Smelters	X			X
S	Primary Aluminum Reduction Plants	X			X
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X			X
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X			X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X			X
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X			X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X			X
Y	Coal Preparation Plants	X			X
Z	Ferroalloy Production Facilities	X			X
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X			X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X			X
BB	Kraft Pulp Mills	X			X
CC	Glass Manufacturing Plants	X			X
DD	Grain Elevators	X			X
EE	Surface Coating of Metal Furniture	X			X

Delegation Status for New Source Performance Standards for Lake County Air Quality Management District, Lassen County Air Pollution Control District, Mariposa County Air Pollution Control District, and Mendocino County Air Pollution Control District

	Subpart	Air pollution control agency			
		Lake County AQMD	Lassen County APCD	Mariposa County AQMD	Mendocino County AQMD
FF	(Reserved)				
GG	Stationary Gas Turbines	X			X
HH	Lime Manufacturing Plants	X			X
KK	Lead-Acid Battery Manufacturing Plants	X			X
LL	Metallic Mineral Processing Plants	X			X
MM	Automobile and Light Duty Trucks Surface Coating Operations	X			X
NN	Phosphate Rock Plants	X			X
PP	Ammonium Sulfate Manufacture	X			X
QQ	Graphic Arts Industry: Publication Rotogravure Printing	X			X
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X			X
SS	Industrial Surface Coating: Large Appliances	X			X
TT	Metal Coil Surface Coating	X			X
UU	Asphalt Processing and Asphalt Roofing Manufacture	X			X
VV	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry	X			X
WW	Beverage Can Surface Coating Industry	X			X
XX	Bulk Gasoline Terminals				
AAA	New Residential Wool Heaters	X			X
BBB	Rubber Tire Manufacturing Industry	X			X
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	X			X
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing	X			X

Delegation Status for New Source Performance Standards for Lake County Air Quality Management District, Lassen County Air Pollution Control District, Mariposa County Air Pollution Control District, and Mendocino County Air Pollution Control District

	Subpart	Air pollution control agency			
		Lake County AQMD	Lassen County APCD	Mariposa County AQMD	Mendocino County AQMD
GGG	Equipment Leaks of VOC in Petroleum Refineries	X			X
HHH	Synthetic Fiber Production Facilities	X			X
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	X			X
JJJ	Petroleum Dry Cleaners	X			X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	X			X
LLL	Onshore Natural Gas Processing: SO2 Emissions	X			X
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X			X
OOO	Nonmetallic Mineral Processing Plants	X			X
PPP	Wool Fiberglass Insulation Manufacturing Plants	X			X
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	X			X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	X			
SSS	Magnetic Tape Coating Facilities	X			X
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines				
UUU	Calciners and Dryers in Mineral Industries	X			X
VVV	Polymeric Coating of Supporting Substrates Facilities	X			X
WWW	Municipal Solid Waste Landfills	X			

(v) Delegations for Modoc Air Pollution Control District, Mojave Desert Air Quality Management District, Monterey Bay Unified Air Pollution Control District and North Coast Unified Air Quality Management District are shown in the following table:

Table 7 to Paragraph (d)(2)(v)—Delegation Status for New Source Performance Standards for Modoc County APCD, Mojave Desert AQMD, Monterey Bay Unified APCD, and North Coast Unified AQMD

	Subpart	Air pollution control agency			
		Modoc County APCD	Mojave Desert AQMD	Monterey Bay Unified APCD	North Coast Unified AQMD
A	General Provisions	X	X	X	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X	X	X	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X	X	X	X
Db	Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
Dc	Small Industrial-Commercial-Institutional Steam Generating Units		X	X	
E	Incinerators	X	X	X	X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994		X		
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994		X		
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996		X		
F	Portland Cement Plants	X	X	X	X
G	Nitric Acid Plants	X	X	X	X
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011				
H	Sulfuric Acid Plant	X	X	X	X
I	Hot Mix Asphalt Facilities	X	X	X	X
J	Petroleum Refineries	X	X	X	X
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007		X		
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X	X	X	X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X	X	X	X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X	X	X	X

Table 7 to Paragraph (d)(2)(v)—Delegation Status for New Source Performance Standards for Modoc County APCD, Mojave Desert AQMD, Monterey Bay Unified APCD, and North Coast Unified AQMD

	Subpart	Air pollution control agency			
		Modoc County APCD	Mojave Desert AQMD	Monterey Bay Unified APCD	North Coast Unified AQMD
L	Secondary Lead Smelters	X	X	X	X
M	Secondary Brass and Bronze Production Plants	X	X	X	X
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X	X	X	X
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	X	X	X	X
O	Sewage Treatment Plants	X	X	X	X
P	Primary Copper Smelters	X	X	X	X
Q	Primary Zinc Smelters	X	X	X	X
R	Primary Lead Smelters	X	X	X	X
S	Primary Aluminum Reduction Plants	X	X	X	X
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X	X	X	X
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X	X	X	X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X	X	X	X
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X	X	X	X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X	X	X	X
Y	Coal Preparation and Processing Plants	X	X	X	X
Z	Ferroalloy Production Facilities	X	X	X	X
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X	X	X	X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X	X	X	X
BB	Kraft Pulp Mills	X	X	X	X
CC	Glass Manufacturing Plants	X	X	X	X
DD	Grain Elevators	X	X	X	X

Table 7 to Paragraph (d)(2)(v)—Delegation Status for New Source Performance Standards for Modoc County APCD, Mojave Desert AQMD, Monterey Bay Unified APCD, and North Coast Unified AQMD

	Subpart	Air pollution control agency			
		Modoc County APCD	Mojave Desert AQMD	Monterey Bay Unified APCD	North Coast Unified AQMD
EE	Surface Coating of Metal Furniture	X	X	X	X
FF	(Reserved)				
GG	Stationary Gas Turbines	X	X	X	X
HH	Lime Manufacturing Plants	X	X	X	X
KK	Lead-Acid Battery Manufacturing Plants	X	X	X	X
LL	Metallic Mineral Processing Plants	X	X	X	X
MM	Automobile and Light Duty Trucks Surface Coating Operations	X	X	X	X
NN	Phosphate Rock Plants	X	X	X	X
PP	Ammonium Sulfate Manufacture	X	X	X	X
QQ	Graphic Arts Industry: Publication Rotogravure Printing	X	X	X	X
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X	X	X	X
SS	Industrial Surface Coating: Large Appliances	X	X	X	X
TT	Metal Coil Surface Coating	X	X	X	X
UU	Asphalt Processing and Asphalt Roofing Manufacture	X	X	X	X
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing	X	X	X	X
VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006		X		
WW	Beverage Can Surface Coating Industry	X	X	X	X
XX	Bulk Gasoline Terminals				
AAA	New Residential Wood Heaters	X	X	X	X
BBB	Rubber Tire Manufacturing Industry	X	X	X	X
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing	X	X	X	

Table 7 to Paragraph (d)(2)(v)—Delegation Status for New Source Performance Standards for Modoc County APCD, Mojave Desert AQMD, Monterey Bay Unified APCD, and North Coast Unified AQMD

	Subpart	Air pollution control agency			
		Modoc County APCD	Mojave Desert AQMD	Monterey Bay Unified APCD	North Coast Unified AQMD
	Industry				
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing	X	X	X	X
GGG	Equipment Leaks of VOC in Petroleum Refineries	X	X	X	X
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006		X		
HHH	Synthetic Fiber Production Facilities	X	X	X	X
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes		X		
JJJ	Petroleum Dry Cleaners	X	X	X	X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	X	X	X	X
LLL	Onshore Natural Gas Processing: SO_2 Emissions	X	X	X	X
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X	X	X	
OOO	Nonmetallic Mineral Processing Plants	X	X	X	X
PPP	Wool Fiberglass Insulation Manufacturing Plants	X	X	X	X
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	X	X	X	X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes		X		
SSS	Magnetic Tape Coating Facilities	X	X	X	X
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	X	X	X	X
UUU	Calciners and Dryers in Mineral Industries		X	X	
VVV	Polymeric Coating of Supporting Substrates Facilities		X	X	X
WWW	Municipal Solid Waste Landfills		X	X	

Table 7 to Paragraph (d)(2)(v)—Delegation Status for New Source Performance Standards for Modoc County APCD, Mojave Desert AQMD, Monterey Bay Unified APCD, and North Coast Unified AQMD

	Subpart	Air pollution control agency			
		Modoc County APCD	Mojave Desert AQMD	Monterey Bay Unified APCD	North Coast Unified AQMD
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commended After June 6, 2001		X		
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001		X		
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006		X		
GGGG	(Reserved)				
HHHH	(Reserved)				
IIII	Stationary Compression Ignition Internal Combustion Engines		X	X	
JJJJ	Stationary Spark Ignition Internal Combustion Engines		X	X	
KKKK	Stationary Combustion Turbines		X	X	
LLLL	New Sewage Sludge Incineration Units				
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution				

(vi) Delegations for Northern Sierra Air Quality Management District, Northern Sonoma County Air Pollution Control District, Placer County Air Pollution Control District, and Sacramento Metropolitan Air Quality Management District are shown in the following table:

Delegation Status for New Source Performance Standards for Northern Sierra Air Quality Management District, Northern Sonoma County Air Pollution Control District, Placer County Air Pollution Control District, and Sacramento Metropolitan Air Quality Management District

	Subpart	Air pollution control agency			
		Northern Sierra AQMD	Northern Sonoma County APCD	Placer County APCD	Sacramento Metropolitan AQMD
A	General Provisions		X		X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971		X		X

Delegation Status for New Source Performance Standards for Northern Sierra Air Quality Management District, Northern Sonoma County Air Pollution Control District, Placer County Air Pollution Control District, and Sacramento Metropolitan Air Quality Management District

	Subpart	Air pollution control agency			
		Northern Sierra AQMD	Northern Sonoma County APCD	Placer County APCD	Sacramento Metropolitan AQMD
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978		X		X
Db	Industrial-Commercial-Institutional Steam Generating Units				X
Dc	Small Industrial Steam Generating Units				X
E	Incinerators		X		X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994				X
Eb	Municipal Waste Combustors Constructed After September 20, 1994				X
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996				X
F	Portland Cement Plants		X		X
G	Nitric Acid Plants		X		X
H	Sulfuric Acid Plants		X		X
I	Hot Mix Asphalt Facilities		X		X
J	Petroleum Refineries		X		X
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978		X		X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984		X		X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984				X
L	Secondary Lead Smelters		X		X
M	Secondary Brass and Bronze Production Plants		X		X

Delegation Status for New Source Performance Standards for Northern Sierra Air Quality Management District, Northern Sonoma County Air Pollution Control District, Placer County Air Pollution Control District, and Sacramento Metropolitan Air Quality Management District

	Subpart	Air pollution control agency			
		Northern Sierra AQMD	Northern Sonoma County APCD	Placer County APCD	Sacramento Metropolitan AQMD
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973		X		X
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983				X
O	Sewage Treatment Plants		X		X
P	Primary Copper Smelters		X		X
Q	Primary Zinc Smelters		X		X
R	Primary Lead Smelters		X		X
S	Primary Aluminum Reduction Plants		X		X
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants		X		X
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants		X		X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants		X		X
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants		X		X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities		X		X
Y	Coal Preparation Plants		X		X
Z	Ferroalloy Production Facilities		X		X
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983		X		X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983				X
BB	Kraft pulp Mills		X		X
CC	Glass Manufacturing Plants		X		X
DD	Grain Elevators		X		X

Delegation Status for New Source Performance Standards for Northern Sierra Air Quality Management District, Northern Sonoma County Air Pollution Control District, Placer County Air Pollution Control District, and Sacramento Metropolitan Air Quality Management District

	Subpart	Air pollution control agency			
		Northern Sierra AQMD	Northern Sonoma County APCD	Placer County APCD	Sacramento Metropolitan AQMD
EE	Surface Coating of Metal Furniture				X
FF	(Reserved)				
GG	Stationary Gas Turbines		X		X
HH	Lime Manufacturing Plants		X		X
KK	Lead-Acid Battery Manufacturing Plants				X
LL	Metallic Mineral Processing Plants				X
MM	Automobile and Light Duty Trucks Surface Coating Operations		X		X
NN	Phosphate Rock Plants				X
PP	Ammonium Sulfate Manufacture		X		X
QQ	Graphic Arts Industry: Publication Rotogravure Printing				X
RR	Pressure Sensitive Tape and Label Surface Coating Operations				X
SS	Industrial Surface Coating: Large Appliances				X
TT	Metal Coil Surface Coating				X
UU	Asphalt Processing and Asphalt Roofing Manufacture				X
VV	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry				X
WW	Beverage Can Surface Coating Industry				X
XX	Bulk Gasoline Terminals				
AAA	New Residential Wool Heaters				X
BBB	Rubber Tire Manufacturing Industry				X
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry				X

Delegation Status for New Source Performance Standards for Northern Sierra Air Quality Management District, Northern Sonoma County Air Pollution Control District, Placer County Air Pollution Control District, and Sacramento Metropolitan Air Quality Management District

	Subpart	Air pollution control agency			
		Northern Sierra AQMD	Northern Sonoma County APCD	Placer County APCD	Sacramento Metropolitan AQMD
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing				X
GGG	Equipment Leaks of VOC in Petroleum Refineries				X
HHH	Synthetic Fiber Production Facilities				X
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes				X
JJJ	Petroleum Dry Cleaners				X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants				X
LLL	Onshore Natural Gas Processing: SO2 Emissions				X
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations				X
OOO	Nonmetallic Mineral Processing Plants				X
PPP	Wool Fiberglass Insulation Manufacturing Plants				X
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems				X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes				X
SSS	Magnetic Tape Coating Facilities				X
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines				X
UUU	Calciners and Dryers in Mineral Industries				X
VVV	Polymeric Coating of Supporting Substrates Facilities				X

Delegation Status for New Source Performance Standards for Northern Sierra Air Quality Management District, Northern Sonoma County Air Pollution Control District, Placer County Air Pollution Control District, and Sacramento Metropolitan Air Quality Management District

	Subpart	Air pollution control agency			
		Northern Sierra AQMD	Northern Sonoma County APCD	Placer County APCD	Sacramento Metropolitan AQMD
WWW	Municipal Solid Waste Landfills				X

(vii) Delegations for San Diego County Air Pollution Control District, San Joaquin Valley Unified Air Pollution Control District, San Luis Obispo County Air Pollution Control District, and Santa Barbara County Air Pollution Control District are shown in the following table:

Table 9 to Paragraph (d)(2)(vii)—Delegation Status for New Source Performance Standards for San Diego County APCD, San Joaquin Valley Unified APCD, San Luis Obispo County APCD, and Santa Barbara County APCD

	Subpart	Air pollution control agency			
		San Diego County APCD	San Joaquin Valley Unified APCD	San Luis Obispo County APCD	Santa Barbara County APCD
A	General Provisions	X	X	X	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X	X	X	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X	X	X	X
Db	Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
Dc	Small Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
E	Incinerators	X	X	X	X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	X	X	X	
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994	X	X		X
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996	X			X
F	Portland Cement Plants	X	X	X	
G	Nitric Acid Plants	X	X	X	
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011				

Table 9 to Paragraph (d)(2)(vii)—Delegation Status for New Source Performance Standards for San Diego County APCD, San Joaquin Valley Unified APCD, San Luis Obispo County APCD, and Santa Barbara County APCD

	Subpart	Air pollution control agency			
		San Diego County APCD	San Joaquin Valley Unified APCD	San Luis Obispo County APCD	Santa Barbara County APCD
H	Sulfuric Acid Plant	X	X	X	
I	Hot Mix Asphalt Facilities	X	X	X	X
J	Petroleum Refineries	X	X	X	X
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007				X
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X	X	X	X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X	X	X	X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X	X	X	X
L	Secondary Lead Smelters	X	X	X	X
M	Secondary Brass and Bronze Production Plants	X	X	X	X
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X	X	X	
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	X	X	X	
O	Sewage Treatment Plants	X	X	X	X
P	Primary Copper Smelters	X	X	X	
Q	Primary Zinc Smelters	X	X	X	
R	Primary Lead Smelters	X	X	X	
S	Primary Aluminum Reduction Plants	X	X	X	
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X	X	X	
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X	X	X	
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X	X	X	

Table 9 to Paragraph (d)(2)(vii)—Delegation Status for New Source Performance Standards for San Diego County APCD, San Joaquin Valley Unified APCD, San Luis Obispo County APCD, and Santa Barbara County APCD

	Subpart	Air pollution control agency			
		San Diego County APCD	San Joaquin Valley Unified APCD	San Luis Obispo County APCD	Santa Barbara County APCD
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X	X	X	
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X	X	X	
Y	Coal Preparation and Processing Plants	X	X	X	
Z	Ferroalloy Production Facilities	X	X	X	
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X	X	X	
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X	X	X	
BB	Kraft Pulp Mills	X	X	X	
CC	Glass Manufacturing Plants	X	X	X	X
DD	Grain Elevators	X	X	X	X
EE	Surface Coating of Metal Furniture	X	X	X	
FF	(Reserved)				
GG	Stationary Gas Turbines	X	X	X	X
HH	Lime Manufacturing Plants	X	X	X	
KK	Lead-Acid Battery Manufacturing Plants	X	X	X	
LL	Metallic Mineral Processing Plants	X	X	X	
MM	Automobile and Light Duty Trucks Surface Coating Operations	X	X	X	
NN	Phosphate Rock Plants	X	X	X	
PP	Ammonium Sulfate Manufacture	X	X	X	
QQ	Graphic Arts Industry: Publication Rotogravure Printing	X	X	X	
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X	X	X	
SS	Industrial Surface Coating: Large Appliances	X	X	X	
TT	Metal Coil Surface Coating	X	X	X	

Table 9 to Paragraph (d)(2)(vii)—Delegation Status for New Source Performance Standards for San Diego County APCD, San Joaquin Valley Unified APCD, San Luis Obispo County APCD, and Santa Barbara County APCD

	Subpart	Air pollution control agency			
		San Diego County APCD	San Joaquin Valley Unified APCD	San Luis Obispo County APCD	Santa Barbara County APCD
UU	Asphalt Processing and Asphalt Roofing Manufacture	X	X	X	
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing	X	X	X	
VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006				X
WW	Beverage Can Surface Coating Industry	X	X	X	
XX	Bulk Gasoline Terminals				
AAA	New Residential Wood Heaters	X	X	X	X
BBB	Rubber Tire Manufacturing Industry	X	X	X	
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	X	X		
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing	X	X	X	
GGG	Equipment Leaks of VOC in Petroleum Refineries	X	X	X	
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006				X
HHH	Synthetic Fiber Production Facilities	X	X	X	
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	X	X		
JJJ	Petroleum Dry Cleaners	X	X	X	
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	X	X	X	
LLL	Onshore Natural Gas Processing: SO_2 Emissions	X	X	X	
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical	X	X		

Table 9 to Paragraph (d)(2)(vii)—Delegation Status for New Source Performance Standards for San Diego County APCD, San Joaquin Valley Unified APCD, San Luis Obispo County APCD, and Santa Barbara County APCD

	Subpart	Air pollution control agency			
		San Diego County APCD	San Joaquin Valley Unified APCD	San Luis Obispo County APCD	Santa Barbara County APCD
	Manufacturing Industry (SOCMI) Distillation Operations				
OOO	Nonmetallic Mineral Processing Plants	X	X	X	X
PPP	Wool Fiberglass Insulation Manufacturing Plants	X	X	X	
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	X	X	X	
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	X	X	X	
SSS	Magnetic Tape Coating Facilities	X	X	X	
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	X	X	X	
UUU	Calciners and Dryers in Mineral Industries	X	X	X	X
VVV	Polymeric Coating of Supporting Substrates Facilities	X	X	X	X
WWW	Municipal Solid Waste Landfills	X	X	X	X
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commended After June 6, 2001	X			X
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001	X			X
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006	X			X
GGGG	(Reserved)				
HHHH	(Reserved)				
IIII	Stationary Compression Ignition Internal Combustion Engines	X			X
JJJJ	Stationary Spark Ignition Internal Combustion Engines	X			X
KKKK	Stationary Combustion Turbines	X			X
LLLL	New Sewage Sludge Incineration Units				

Table 9 to Paragraph (d)(2)(vii)—Delegation Status for New Source Performance Standards for San Diego County APCD, San Joaquin Valley Unified APCD, San Luis Obispo County APCD, and Santa Barbara County APCD

	Subpart	Air pollution control agency			
		San Diego County APCD	San Joaquin Valley Unified APCD	San Luis Obispo County APCD	Santa Barbara County APCD
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution				
QQQQ	Standards of Performance for New Residential Hydronic Heaters and Forced-Air Furnaces	X			
TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	X			

(viii) Delegations for Shasta County Air Quality Management District, Siskiyou County Air Pollution Control District, South Coast Air Quality Management District, and Tehama County Air Pollution Control District are shown in the following table:

Delegation Status for New Source Performance Standards for Shasta County AQMD, Siskiyou County APCD, South Coast AQMD, and Tehama County APCD

	Subpart	Air pollution control agency			
		Shasta County AQMD	Siskiyou County APCD	South Coast AQMD	Tehama County APCD
A	General Provisions	X	X	X	
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X		X	
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978			X	
Db	Industrial-Commercial-Institutional Steam Generating Units			X	
Dc	Small Industrial-Commercial-Institutional Steam Generating Units			X	
E	Incinerators	X		X	
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994			X	
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994			X	
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996			X	

Delegation Status for New Source Performance Standards for Shasta County AQMD, Siskiyou County APCD, South Coast AQMD, and Tehama County APCD

	Subpart	Air pollution control agency			
		Shasta County AQMD	Siskiyou County APCD	South Coast AQMD	Tehama County APCD
F	Portland Cement Plants	X		X	
G	Nitric Acid Plants	X		X	
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011				
H	Sulfuric Acid Plant	X		X	
I	Hot Mix Asphalt Facilities	X		X	
J	Petroleum Refineries	X		X	
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007			X	
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X		X	
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984			X	
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984			X	
L	Secondary Lead Smelters	X		X	
M	Secondary Brass and Bronze Production Plants	X		X	
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X		X	
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983			X	
O	Sewage Treatment Plants	X		X	
P	Primary Copper Smelters	X		X	
Q	Primary Zinc Smelters	X		X	
R	Primary Lead Smelters	X		X	

Delegation Status for New Source Performance Standards for Shasta County AQMD, Siskiyou County APCD, South Coast AQMD, and Tehama County APCD

	Subpart	Air pollution control agency			
		Shasta County AQMD	Siskiyou County APCD	South Coast AQMD	Tehama County APCD
S	Primary Aluminum Reduction Plants	X		X	
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X		X	
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X		X	
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X		X	
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X		X	
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X		X	
Y	Coal Preparation and Processing Plants	X		X	
Z	Ferroalloy Production Facilities	X		X	
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X		X	
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983			X	
BB	Kraft Pulp Mills	X		X	
CC	Glass Manufacturing Plants			X	
DD	Grain Elevators	X		X	
EE	Surface Coating of Metal Furniture			X	
FF	(Reserved)				
GG	Stationary Gas Turbines			X	
HH	Lime Manufacturing Plants	X		X	
KK	Lead-Acid Battery Manufacturing Plants			X	
LL	Metallic Mineral Processing Plants			X	
MM	Automobile and Light Duty Trucks Surface Coating Operations			X	
NN	Phosphate Rock Plants			X	
PP	Ammonium Sulfate Manufacture			X	

Delegation Status for New Source Performance Standards for Shasta County AQMD, Siskiyou County APCD, South Coast AQMD, and Tehama County APCD

	Subpart	Air pollution control agency			
		Shasta County AQMD	Siskiyou County APCD	South Coast AQMD	Tehama County APCD
QQ	Graphic Arts Industry: Publication Rotogravure Printing			X	
RR	Pressure Sensitive Tape and Label Surface Coating Operations			X	
SS	Industrial Surface Coating: Large Appliances			X	
TT	Metal Coil Surface Coating			X	
UU	Asphalt Processing and Asphalt Roofing Manufacture			X	
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing			X	
VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006			X	
WW	Beverage Can Surface Coating Industry			X	
XX	Bulk Gasoline Terminals				
AAA	New Residential Wood Heaters		X	X	
BBB	Rubber Tire Manufacturing Industry		X	X	
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry			X	
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing			X	
GGG	Equipment Leaks of VOC in Petroleum Refineries			X	
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006			X	
HHH	Synthetic Fiber Production Facilities			X	
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes			X	
JJJ	Petroleum Dry Cleaners			X	

Delegation Status for New Source Performance Standards for Shasta County AQMD, Siskiyou County APCD, South Coast AQMD, and Tehama County APCD

	Subpart	Air pollution control agency			
		Shasta County AQMD	Siskiyou County APCD	South Coast AQMD	Tehama County APCD
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants			X	
LLL	Onshore Natural Gas Processing: SO_2 Emissions			X	
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations			X	
OOO	Nonmetallic Mineral Processing Plants			X	
PPP	Wool Fiberglass Insulation Manufacturing Plants			X	
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems		X	X	
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes			X	
SSS	Magnetic Tape Coating Facilities		X	X	
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines		X	X	
UUU	Calciners and Dryers in Mineral Industries			X	
VVV	Polymeric Coating of Supporting Substrates Facilities			X	
WWW	Municipal Solid Waste Landfills			X	
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commended After June 6, 2001	X	X	X	
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001			X	
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006			X	
GGGG	(Reserved)				
HHHH	(Reserved)				
IIII	Stationary Compression Ignition Internal Combustion Engines			X	

Delegation Status for New Source Performance Standards for Shasta County AQMD, Siskiyou County APCD, South Coast AQMD, and Tehama County APCD

	Subpart	Air pollution control agency			
		Shasta County AQMD	Siskiyou County APCD	South Coast AQMD	Tehama County APCD
JJJJ	Stationary Spark Ignition Internal Combustion Engines			X	
KKKK	Stationary Combustion Turbines			X	
LLLL	New Sewage Sludge Incineration Units				
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution				

(ix) Delegations for Tuolumne County Air Pollution Control District, Ventura County Air Pollution Control District, and Yolo-Solano Air Quality Management District are shown in the following table:

Table 11 to Paragraph (d)(2)(ix)—Delegation Status for New Source Performance Standards for Tuolumne County APCD, Ventura County APCD, and Yolo-Solano AQMD

	Subpart	Air pollution control agency		
		Tuolumne County APCD	Ventura County APCD	Yolo-Solano AQMD
A	General Provisions		X	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971		X	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978		X	
Db	Industrial-Commercial-Institutional Steam Generating Units		X	X
Dc	Small Industrial-Commercial-Institutional Steam Generating Units		X	
E	Incinerators		X	
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994		X	
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994			
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996			
F	Portland Cement Plants		X	
G	Nitric Acid Plants		X	
H	Sulfuric Acid Plant		X	

Table 11 to Paragraph (d)(2)(ix)—Delegation Status for New Source Performance Standards for Tuolumne County APCD, Ventura County APCD, and Yolo-Solano AQMD

	Subpart	Air pollution control agency		
		Tuolumne County APCD	Ventura County APCD	Yolo-Solano AQMD
I	Hot Mix Asphalt Facilities		X	X
J	Petroleum Refineries		X	X
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978		X	X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984		X	
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984		X	
L	Secondary Lead Smelters		X	
M	Secondary Brass and Bronze Production Plants		X	
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973		X	
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983		X	
O	Sewage Treatment Plants		X	
P	Primary Copper Smelters		X	
Q	Primary Zinc Smelters		X	
R	Primary Lead Smelters		X	
S	Primary Aluminum Reduction Plants		X	
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants		X	
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants		X	
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants		X	
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants		X	
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities		X	
Y	Coal Preparation and Processing Plants		X	

Table 11 to Paragraph (d)(2)(ix)—Delegation Status for New Source Performance Standards for Tuolumne County APCD, Ventura County APCD, and Yolo-Solano AQMD

	Subpart	Air pollution control agency		
		Tuolumne County APCD	Ventura County APCD	Yolo-Solano AQMD
Z	Ferroalloy Production Facilities		X	
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983		X	X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983		X	
BB	Kraft Pulp Mills		X	
CC	Glass Manufacturing Plants		X	
DD	Grain Elevators		X	
EE	Surface Coating of Metal Furniture		X	
FF	(Reserved)			
GG	Stationary Gas Turbines		X	
HH	Lime Manufacturing Plants		X	
KK	Lead-Acid Battery Manufacturing Plants		X	
LL	Metallic Mineral Processing Plants		X	
MM	Automobile and Light Duty Trucks Surface Coating Operations		X	
NN	Phosphate Rock Plants		X	
PP	Ammonium Sulfate Manufacture		X	
QQ	Graphic Arts Industry: Publication Rotogravure Printing		X	
RR	Pressure Sensitive Tape and Label Surface Coating Operations		X	
SS	Industrial Surface Coating: Large Appliances		X	
TT	Metal Coil Surface Coating		X	
UU	Asphalt Processing and Asphalt Roofing Manufacture		X	
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing		X	
WW	Beverage Can Surface Coating Industry		X	

Table 11 to Paragraph (d)(2)(ix)—Delegation Status for New Source Performance Standards for Tuolumne County APCD, Ventura County APCD, and Yolo-Solano AQMD

	Subpart	Air pollution control agency		
		Tuolumne County APCD	Ventura County APCD	Yolo-Solano AQMD
XX	Bulk Gasoline Terminals			
AAA	New Residential Wood Heaters		X	
BBB	Rubber Tire Manufacturing Industry		X	
CCC	(Reserved)			
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry		X	
EEE	(Reserved)			
FFF	Flexible Vinyl and Urethane Coating and Printing		X	
GGG	Equipment Leaks of VOC in Petroleum Refineries		X	
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006			
HHH	Synthetic Fiber Production Facilities		X	
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes		X	
JJJ	Petroleum Dry Cleaners		X	
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants		X	
LLL	Onshore Natural Gas Processing: SO_2 Emissions		X	
MMM	(Reserved)			
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations		X	
OOO	Nonmetallic Mineral Processing Plants		X	X
PPP	Wool Fiberglass Insulation Manufacturing Plants		X	
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems		X	
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes		X	
SSS	Magnetic Tape Coating Facilities		X	

Table 11 to Paragraph (d)(2)(ix)—Delegation Status for New Source Performance Standards for Tuolumne County APCD, Ventura County APCD, and Yolo-Solano AQMD

	Subpart	Air pollution control agency		
		Tuolumne County APCD	Ventura County APCD	Yolo-Solano AQMD
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines		X	
UUU	Calciners and Dryers in Mineral Industries		X	
VVV	Polymeric Coating of Supporting Substrates Facilities		X	
WWW	Municipal Solid Waste Landfills	X	X	

(3) *Hawaii.* The following table identifies delegations for Hawaii:

Delegation Status for New Source Performance Standards for Hawaii:

Delegation Status for New Source Performance Standards for Hawaii

	Subpart	Hawaii
A	General Provisions	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X
Db	Industrial-Commercial-Institutional Steam Generating Units	X
Dc	Small Industrial Steam Generating Units	X
E	Incinerators	X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	X
Eb	Municipal Waste Combustors Constructed After September 20, 1994	X
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996	X
F	Portland Cement Plants	X
G	Nitric Acid Plants	
H	Sulfuric Acid Plants	
I	Hot Mix Asphalt Facilities	X
J	Petroleum Refineries	X
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007	

Delegation Status for New Source Performance Standards for Hawaii		
	Subpart	Hawaii
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X
L	Secondary Lead Smelters	
M	Secondary Brass and Bronze Production Plants	
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	
O	Sewage Treatment Plants	X
P	Primary Copper Smelters	
Q	Primary Zinc Smelters	
R	Primary Lead Smelters	
S	Primary Aluminum Reduction Plants	
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	
Y	Coal Preparation Plants	X
Z	Ferroalloy Production Facilities	
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X
BB	Kraft pulp Mills	
CC	Glass Manufacturing Plants	

Delegation Status for New Source Performance Standards for Hawaii		
	Subpart	Hawaii
DD	Grain Elevators	
EE	Surface Coating of Metal Furniture	
FF	(Reserved)	
GG	Stationary Gas Turbines	X
HH	Lime Manufacturing Plants	
KK	Lead-Acid Battery Manufacturing Plants	
LL	Metallic Mineral Processing Plants	
MM	Automobile and Light Duty Trucks Surface Coating Operations	
NN	Phosphate Rock Plants	
PP	Ammonium Sulfate Manufacture	
QQ	Graphic Arts Industry: Publication Rotogravure Printing	
RR	Pressure Sensitive Tape and Label Surface Coating Operations	
SS	Industrial Surface Coating: Large Appliances	
TT	Metal Coil Surface Coating	
UU	Asphalt Processing and Asphalt Roofing Manufacture	
VV	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry	X
VVa	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006	
WW	Beverage Can Surface Coating Industry	X
XX	Bulk Gasoline Terminals	X
AAA	New Residential Wool Heaters	
BBB	Rubber Tire Manufacturing Industry	
CCC	(Reserved)	
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	
EEE	(Reserved)	
FFF	Flexible Vinyl and Urethane Coating and Printing	
GGG	Equipment Leaks of VOC in Petroleum Refineries	X

Delegation Status for New Source Performance Standards for Hawaii		
	Subpart	Hawaii
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006	
HHH	Synthetic Fiber Production Facilities	
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	
JJJ	Petroleum Dry Cleaners	X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	
LLL	Onshore Natural Gas Processing: SO2 Emissions	
MMM	(Reserved)	
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X
OOO	Nonmetallic Mineral Processing Plants	X
PPP	Wool Fiberglass Insulation Manufacturing Plants	
QQQ	VOC Emissions From Petroleum Refinery Wastewater	X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	
SSS	Magnetic Tape Coating Facilities	
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	
UUU	Calciners and Dryers in Mineral Industries	X
VVV	Polymeric Coating of Supporting Substrates Facilities	X
WWW	Municipal Solid Waste Landfills	X
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001	X
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001	X
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006	
GGGG	(Reserved)	
IIII	Stationary Compression Ignition Internal Combustion Engines	
JJJJ	Stationary Spark Ignition Internal Combustion Engines	

Delegation Status for New Source Performance Standards for Hawaii		
	Subpart	Hawaii
KKKK	Stationary Combustion Turbines	

(4) *Nevada.* The following table identifies delegations for Nevada:

Table 12 to Paragraph (d)(4)—Delegation Status for New Source Performance Standards for Nevada				
	Subpart	Air pollution control agency		
		Nevada DEP	Clark County	Washoe County
A	General Provisions	X	X	X
Cf	Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills	X		
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X	X	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X	X	
Db	Industrial-Commercial-Institutional Steam Generating Units	X	X	
Dc	Small Industrial-Commercial-Institutional Steam Generating Units	X	X	
E	Incinerators	X	X	X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	X	X	
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994	X	X	
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996	X	X	
F	Portland Cement Plants	X	X	X
G	Nitric Acid Plants	X	X	
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011	X		
H	Sulfuric Acid Plant	X	X	
I	Hot Mix Asphalt Facilities	X	X	X
J	Petroleum Refineries	X	X	
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007	X		
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or	X	X	X

Table 12 to Paragraph (d)(4)—Delegation Status for New Source Performance Standards for Nevada				
	Subpart	Air pollution control agency		
		Nevada DEP	Clark County	Washoe County
	Modification Commenced After June 11, 1973, and Prior to May 19, 1978			
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X	X	X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X	X	
L	Secondary Lead Smelters	X	X	X
M	Secondary Brass and Bronze Production Plants	X	X	
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X	X	
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	X	X	
O	Sewage Treatment Plants	X	X	X
P	Primary Copper Smelters	X	X	X
Q	Primary Zinc Smelters	X	X	X
R	Primary Lead Smelters	X	X	X
S	Primary Aluminum Reduction Plants	X	X	
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants		X	
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants		X	
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants		X	
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants		X	
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities		X	
Y	Coal Preparation and Processing Plants	X	X	X
Z	Ferroalloy Production Facilities	X	X	
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X	X	
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X	X	

Table 12 to Paragraph (d)(4)—Delegation Status for New Source Performance Standards for Nevada

	Subpart	Air pollution control agency		
		Nevada DEP	Clark County	Washoe County
BB	Kraft Pulp Mills		X	
CC	Glass Manufacturing Plants	X	X	
DD	Grain Elevators	X	X	X
EE	Surface Coating of Metal Furniture	X	X	X
FF	(Reserved)			
GG	Stationary Gas Turbines	X	X	X
HH	Lime Manufacturing Plants	X	X	X
KK	Lead-Acid Battery Manufacturing Plants	X	X	X
LL	Metallic Mineral Processing Plants	X	X	X
MM	Automobile and Light Duty Trucks Surface Coating Operations	X	X	X
NN	Phosphate Rock Plants	X	X	X
PP	Ammonium Sulfate Manufacture	X	X	
QQ	Graphic Arts Industry: Publication Rotogravure Printing	X	X	X
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X	X	
SS	Industrial Surface Coating: Large Appliances	X	X	X
TT	Metal Coil Surface Coating	X	X	X
UU	Asphalt Processing and Asphalt Roofing Manufacture	X	X	X
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing	X	X	X
VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006	X	X	
WW	Beverage Can Surface Coating Industry	X	X	
XX	Bulk Gasoline Terminals	X	X	
AAA	New Residential Wood Heaters		X	
BBB	Rubber Tire Manufacturing Industry	X	X	

Table 12 to Paragraph (d)(4)—Delegation Status for New Source Performance Standards for Nevada

	Subpart	Air pollution control agency		
		Nevada DEP	Clark County	Washoe County
CCC	(Reserved)			
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	X	X	
EEE	(Reserved)			
FFF	Flexible Vinyl and Urethane Coating and Printing	X	X	
GGG	Equipment Leaks of VOC in Petroleum Refineries	X	X	
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006	X	X	
HHH	Synthetic Fiber Production Facilities	X	X	
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	X	X	
JJJ	Petroleum Dry Cleaners	X	X	X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	X	X	
LLL	Onshore Natural Gas Processing: SO_2 Emissions	X	X	
MMM	(Reserved)			
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X	X	
OOO	Nonmetallic Mineral Processing Plants	X	X	
PPP	Wool Fiberglass Insulation Manufacturing Plants	X	X	
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	X	X	
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	X	X	
SSS	Magnetic Tape Coating Facilities	X	X	
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	X	X	X
UUU	Calciners and Dryers in Mineral Industries	X	X	X
VVV	Polymeric Coating of Supporting Substrates Facilities	X	X	X
WWW	Municipal Solid Waste Landfills	X	X	X

Table 12 to Paragraph (d)(4)—Delegation Status for New Source Performance Standards for Nevada

	Subpart	Air pollution control agency		
		Nevada DEP	Clark County	Washoe County
XXX	Municipal Solid Waste Landfills that Commenced Construction, Reconstruction, or Modification after July 17, 2014	X		
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commended After June 6, 2001	X	X	X
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001	X	X	X
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006	X	X	X
GGGG	(Reserved)			
HHHH	(Reserved)			
IIII	Stationary Compression Ignition Internal Combustion Engines	X	X	X
JJJJ	Stationary Spark Ignition Internal Combustion Engines	X	X	X
KKKK	Stationary Combustion Turbines	X	X	X
LLLL	New Sewage Sludge Incineration Units		X	
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution	X		

(5) *Guam.* The following table identifies delegations as of June 15, 2001:

Delegation Status for New Source Performance Standards for Guam

	Subpart	Guam
A	General Provisions	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	
Db	Industrial-Commercial-Institutional Steam Generating Units	
Dc	Small Industrial Steam Generating Units	
E	Incinerators	

Delegation Status for New Source Performance Standards for Guam		
	Subpart	Guam
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	
Eb	Municipal Waste Combustors Constructed After September 20, 1994	
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996	
F	Portland Cement Plants	X
G	Nitric Acid Plants	
H	Sulfuric Acid Plants	
I	Hot Mix Asphalt Facilities	X
J	Petroleum Refineries	X
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X

(e) The following lists the specific part 60 standards that have been delegated unchanged to the air pollution control agencies in Region 6.

(1) *New Mexico.* The New Mexico Environment Department has been delegated all part 60 standards promulgated by the EPA, except subpart AAA—Standards of Performance for New Residential Wood Heaters; and subpart QQQQ—Standards of Performance for New Residential Hydronic Heaters and Forced-Air Furnaces, as amended in the Federal Register through January 15, 2017.

(2) *Louisiana.* The Louisiana Department of Environmental Quality has been delegated all part 60 standards promulgated by EPA, except subpart AAA—Standards of Performance for New Residential Wood Heaters, as amended in the Federal Register through July 1, 2013.

Delegation Status for Part 60 Standards—State of Louisiana **[Excluding Indian Country]**		
Subpart	Source category	LDEQ[1]
A	General Provisions	Yes
Ce	Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators	Yes
D	Fossil Fueled Steam Generators (>250 MM BTU/hr)	Yes
Da	Electric Utility Steam Generating Units (>250 MM BTU/hr)	Yes
Db	Industrial-Commercial-Institutional Steam Generating Units (100 to 250 MM BTU/hr)	Yes
Dc	Industrial-Commercial-Institutional Small Steam Generating Units (10 to 100 MM BTU/hr)	Yes
E	Incinerators (>50 tons per day)	Yes
Ea	Municipal Waste Combustors	Yes

Delegation Status for Part 60 Standards—State of Louisiana **[Excluding Indian Country]**		
Subpart	Source category	LDEQ[1]
Eb	Large Municipal Waste Combustors	Yes
Ec	Hospital/Medical/Infectious Waste Incinerators	Yes
F	Portland Cement Plants	Yes
G	Nitric Acid Plants	Yes
Ga	Nitric Acid Plants (after October 14, 2011)	Yes
H	Sulfuric Acid Plants	Yes
I	Hot Mix Asphalt Facilities	Yes
J	Petroleum Refineries	Yes
Ja	Petroleum Refineries (After May 14, 2007)	Yes
K	Storage Vessels for Petroleum Liquids (After 6/11/73 & Before 5/19/78)	Yes
Ka	Storage Vessels for Petroleum Liquids (After 6/11/73 & Before 5/19/78)	Yes
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Stg/Vessels) After 7/23/84	Yes
L	Secondary Lead Smelters Yes	Yes
M	Secondary Brass and Bronze Production Plants	Yes
N	Primary Emissions from Basic Oxygen Process Furnaces (Construction Commenced After June 11, 1973)	Yes
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities Construction is Commenced After January 20, 1983	Yes
O	Sewage Treatment Plants	Yes
P	Primary Copper Smelters	Yes
Q	Primary Zinc Smelters	Yes
R	Primary Lead Smelters	Yes
S	Primary Aluminum Reduction Plants	Yes
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Plants	Yes
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	Yes
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	Yes
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	Yes

Delegation Status for Part 60 Standards—State of Louisiana **[Excluding Indian Country]**		
Subpart	Source category	LDEQ[1]
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	Yes
Y	Coal Preparation Plants	Yes
Z	Ferroalloy Production Facilities	Yes
AA	Steel Plants: Electric Arc Furnaces After 10/21/74 & On or Before 8/17/83	Yes
AAa	Steel Plants: Electric Arc Furnaces & Argon-Oxygen Decarburization Vessels After 8/07/83	Yes
BB	Kraft Pulp Mills	Yes
CC	Glass Manufacturing Plants	Yes
DD	Grain Elevators	Yes
EE	Surface Coating of Metal Furniture	Yes
GG	Stationary Gas Turbines	Yes
HH	Lime Manufacturing Plants	Yes
KK	Lead-Acid Battery Manufacturing Plants	Yes
LL	Metallic Mineral Processing Plants	Yes
MM	Automobile & Light Duty Truck Surface Coating Operations	Yes
NN	Phosphate Manufacturing Plants	Yes
PP	Ammonium Sulfate Manufacture	Yes
QQ	Graphic Arts Industry: Publication Rotogravure Printing	Yes
RR	Pressure Sensitive Tape and Label Surface Coating Operations	Yes
SS	Industrial Surface Coating: Large Appliances	Yes
TT	Metal Coil Surface Coating	Yes
UU	Asphalt Processing and Asphalt Roofing Manufacture	Yes
VV	VOC Equipment Leaks in the SOCMI Industry	Yes
VVa	VOC Equipment Leaks in the SOCMI Industry (After November 7, 2006)	Yes
XX	Bulk Gasoline Terminals	Yes
AAA	New Residential Wood Heaters	No
BBB	Rubber Tire Manufacturing Industry	Yes

Delegation Status for Part 60 Standards—State of Louisiana **[Excluding Indian Country]**		
Subpart	Source category	LDEQ[1]
DDD	Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry	Yes
FFF	Flexible Vinyl and Urethane Coating and Printing	Yes
GGG	VOC Equipment Leaks in Petroleum Refineries	Yes
HHH	Synthetic Fiber Production	Yes
III	VOC Emissions from the SOCMI Air Oxidation Unit Processes	Yes
JJJ	Petroleum Dry Cleaners	Yes
KKK	VOC Equipment Leaks From Onshore Natural Gas Processing Plants	Yes
LLL	Onshore Natural Gas Processing: SO_2 Emissions	Yes
NNN	VOC Emissions from SOCMI Distillation Operations	Yes
OOO	Nonmetallic Mineral Processing Plants	Yes
PPP	Wool Fiberglass Insulation Manufacturing Plants	Yes
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	Yes
RRR	VOC Emissions from SOCMI Reactor Processes	Yes
SSS	Magnetic Tape Coating Operations	Yes
TTT	Industrial Surface Coating: Plastic Parts for Business Machines	Yes
UUU	Calciners and Dryers in Mineral Industries	Yes
VVV	Polymeric Coating of Supporting Substrates Facilities	Yes
WWW	Municipal Solid Waste Landfills	Yes
AAAA	Small Municipal Waste Combustion Units (Construction is Commenced After 8/30/99 or Modification/Reconstruction is Commenced After 6/06/2001)	Yes
CCCC	Commercial & Industrial Solid Waste Incineration Units (Construction is Commenced After 11/30/1999 or Modification/Reconstruction is Commenced on or After 6/01/2001)	Yes
DDDD	Emission Guidelines & Compliance Times for Commercial & Industrial Solid Waste Incineration Units (Commenced Construction On or Before 11/30/1999)	Yes
EEEE	Other Solid Waste Incineration Units (Constructed after 12/09/2004 or Modification/Reconstruction is commenced on or after 06/16/2004)	Yes
IIII	Stationary Compression Ignition Internal Combustion Engines	Yes

Delegation Status for Part 60 Standards—State of Louisiana **[Excluding Indian Country]**		
Subpart	Source category	LDEQ[1]
JJJJ	Stationary Spark Ignition Internal Combustion Engines	Yes
KKKK	Stationary Combustion Turbines (Construction Commenced After 02/18/2005)	Yes
LLLL	New Sewage Sludge Incineration Units	Yes
MMMM	Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units	Yes
OOOO	Crude Oil and Natural Gas Production, Transmission and Distribution	Yes
[1] The Louisiana Department of Environmental Quality (LDEQ) has been delegated all Part 60 standards promulgated by EPA, except subpart AAA—Standards of Performance for New Residential Wood Heaters—as amended in the Federal Register through July 1, 2013.		

(3) *Albuquerque-Bernalillo County Air Quality Control Board.* The Albuquerque-Bernalillo County Air Quality Control Board has been delegated all part 60 standards promulgated by the EPA, except subpart AAA of this part and subpart QQQQ of this part as amended through January 23, 2017.

Editorial Note

Editorial Note: For Federal Register citations affecting § 60.4, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.govinfo.gov.*

§ 60.5 Determination of construction or modification.

(a) When requested to do so by an owner or operator, the Administrator will make a determination of whether action taken or intended to be taken by such owner or operator constitutes construction (including reconstruction) or modification or the commencement thereof within the meaning of this part.

(b) The Administrator will respond to any request for a determination under paragraph (a) of this section within 30 days of receipt of such request.

§ 60.6 Review of plans.

(a) When requested to do so by an owner or operator, the Administrator will review plans for construction or modification for the purpose of providing technical advice to the owner or operator.

(b)

(1) A separate request shall be submitted for each construction or modification project.

(2) Each request shall identify the location of such project, and be accompanied by technical information describing the proposed nature, size, design, and method of operation of each affected facility involved in such project, including information on any equipment to be used for measurement or control of emissions.

(c) Neither a request for plans review nor advice furnished by the Administrator in response to such request shall

(1) relieve an owner or operator of legal responsibility for compliance with any provision of this part or of any applicable State or local requirement, or

(2) prevent the Administrator from implementing or enforcing any provision of this part or taking any other action authorized by the Act.

§ 60.7 Notification and record keeping.

(a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:

(1) A notification of the date construction (or reconstruction as defined under § 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.

(2) [Reserved]

(3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

(4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in § 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

(5) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with § 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.

(6) A notification of the anticipated date for conducting the opacity observations required by § 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

(7) A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by § 60.8 in lieu of Method 9 observation data as allowed by § 60.11(e)(5) of this part. This notification shall be postmarked not less than 30 days prior to the date of the performance test.

(b) Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(c) Each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and-or summary report form (see paragraph (d) of this section) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with § 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(d) The summary report form shall contain the information and be in the format shown in figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in § 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in § 60.7(c) shall both be submitted.

Figure 1—Summary Report—Gaseous and Opacity Excess Emission and Monitoring System Performance

Pollutant (Circle One—SO_2/NO_X/TRS/H_2S/CO/Opacity)

Reporting period dates: From _____ to _____

Company:

Emission Limitation

Address:

Monitor Manufacturer and Model No.

Date of Latest CMS Certification or Audit

Process Unit(s) Description:

Total source operating time in reporting period[1]

Emission data summary[1]		CMS performance summary[1]	
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Startup/shutdown		a. Monitor equipment malfunctions	
b. Control equipment problems		b. Non-Monitor equipment malfunctions	
c. Process problems		c. Quality assurance calibration	
d. Other known causes		d. Other known causes	
e. Unknown causes		e. Unknown causes	
2. Total duration of excess emission		2. Total CMS Downtime	
3. Total duration of excess emissions × (100) [Total source operating time]	%[2]	3. [Total CMS Downtime] × (100) [Total source operating time]	%[2]
[1] For opacity, record all times in minutes. For gases, record all times in hours.			
[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the			

Emission data summary[1]		CMS performance summary[1]	
total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in § 60.7(c) shall be submitted.			

On a separate page, describe any changes since last quarter in CMS, process or controls. I certify that the information contained in this report is true, accurate, and complete.

Name

Signature

Title

Date

(e)

(1) Notwithstanding the frequency of reporting requirements specified in paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the applicable standard; and

(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (e)(2) of this section.

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in paragraphs (e)(1) and (e)(2) of this section.

(f) Any owner or operator subject to the provisions of this part shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring

system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as follows:

(1) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

(2) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

(3) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (f) of this section, if the Administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

(g) If notification substantially similar to that in paragraph (a) of this section is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of paragraph (a) of this section.

(h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.

§ 60.8 Performance tests.

(a) Except as specified in paragraphs (a)(1),(a)(2), (a)(3), and (a)(4) of this section, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by this part, and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

(1) If a force majeure is about to occur, occurs, or has occurred for which the affected owner or operator intends to assert a claim of force majeure, the owner or operator shall notify the Administrator, in writing as soon as practicable following the date the owner or operator first knew, or through due diligence should have known that the event may cause or caused a delay in testing beyond the regulatory deadline, but the notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification shall occur as soon as practicable.

(2) The owner or operator shall provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in testing beyond the regulatory deadline to the force majeure; describe the measures taken or to be taken to minimize the delay; and identify a date by which the owner or operator proposes to conduct the performance test. The performance test shall be conducted as soon as practicable after the force majeure occurs.

(3) The decision as to whether or not to grant an extension to the performance test deadline is solely within the discretion of the Administrator. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an extension as soon as practicable.

(4) Until an extension of the performance test deadline has been approved by the Administrator under paragraphs (a)(1), (2), and (3) of this section, the owner or operator of the affected facility remains strictly subject to the requirements of this part.

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator

(1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology,

(2) approves the use of an equivalent method,

(3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance,

(4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or

(5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

(d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.

(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such facility. This includes

(i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and

(ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

(2) Safe sampling platform(s).

(3) Safe access to sampling platform(s).

(4) Utilities for sampling and testing equipment.

(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method.

(1) Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

(2) Contents of report (electronic or paper submitted copy). Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, the report for a performance test shall include the elements identified in paragraphs (f)(2)(i) through (vi) of this section.

(i) General identification information for the facility including a mailing address, the physical address, the owner or operator or responsible official (where applicable) and his/her email address, and the appropriate Federal Registry System (FRS) number for the facility.

(ii) Purpose of the test including the applicable regulation(s) requiring the test, the pollutant(s) and other parameters being measured, the applicable emission standard and any process parameter component, and a brief process description.

(iii) Description of the emission unit tested including fuel burned, control devices, and vent characteristics; the appropriate source classification code (SCC); the permitted maximum process rate (where applicable); and the sampling location.

(iv) Description of sampling and analysis procedures used and any modifications to standard procedures, quality assurance procedures and results, record of process operating conditions that demonstrate the applicable test conditions are met, and values for any operating parameters for which limits were being set during the test.

(v) Where a test method requires you record or report, the following shall be included: Record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, chain-of-custody documentation, and example calculations for reported results.

(vi) Identification of the company conducting the performance test including the primary office address, telephone number, and the contact for this test program including his/her email address.

(g) The performance testing shall include a test method performance audit (PA) during the performance test. The PAs consist of blind audit samples supplied by an accredited audit sample provider and analyzed during the performance test in order to provide a measure of test data bias. Gaseous audit samples are designed to audit the performance of the sampling system as well as the analytical system and must be collected by the sampling system during the compliance test just as the compliance samples are collected. If a liquid or solid audit sample is designed to audit the sampling system, it must also be collected by the sampling system during the compliance test. If multiple sampling systems or sampling trains are used during the compliance test for any of the test methods, the tester is only required to use one of the sampling systems per method to collect the audit sample. The audit sample must be analyzed by the same analyst using the same analytical reagents and analytical system and at the same time as the compliance samples. Retests are required when there is a failure to produce acceptable results for an audit sample. However, if the audit results do not affect the compliance or noncompliance status of the affected facility, the compliance authority may waive the reanalysis requirement, further audits, or retests and accept the results of the compliance test. Acceptance of the test results shall constitute a waiver of the reanalysis requirement, further audits, or retests. The compliance authority may also use the audit sample failure and the compliance test results as evidence to determine the compliance or noncompliance status of the affected facility. A blind audit sample is a sample whose value is known only to the sample provider and is not revealed to the tested facility until after they report the measured value of the audit

sample. For pollutants that exist in the gas phase at ambient temperature, the audit sample shall consist of an appropriate concentration of the pollutant in air or nitrogen that can be introduced into the sampling system of the test method at or near the same entry point as a sample from the emission source. If no gas phase audit samples are available, an acceptable alternative is a sample of the pollutant in the same matrix that would be produced when the sample is recovered from the sampling system as required by the test method. For samples that exist only in a liquid or solid form at ambient temperature, the audit sample shall consist of an appropriate concentration of the pollutant in the same matrix that would be produced when the sample is recovered from the sampling system as required by the test method. An accredited audit sample provider (AASP) is an organization that has been accredited to prepare audit samples by an independent, third party accrediting body.

(1) The source owner, operator, or representative of the tested facility shall obtain an audit sample, if commercially available, from an AASP for each test method used for regulatory compliance purposes. No audit samples are required for the following test methods: Methods 3A and 3C of appendix A-3 of part 60, Methods 6C, 7E, 9, and 10 of appendix A-4 of part 60, Methods 18 and 19 of appendix A-6 of part 60, Methods 20, 22, and 25A of appendix A-7 of part 60, Methods 30A and 30B of appendix A-8 of part 60, and Methods 303, 318, 320, and 321 of appendix A of part 63 of this chapter. If multiple sources at a single facility are tested during a compliance test event, only one audit sample is required for each method used during a compliance test. The compliance authority responsible for the compliance test may waive the requirement to include an audit sample if they believe that an audit sample is not necessary. “Commercially available” means that two or more independent AASPs have blind audit samples available for purchase. If the source owner, operator, or representative cannot find an audit sample for a specific method, the owner, operator, or representative shall consult the EPA Web site at the following URL, *www.epa.gov/ttn/emc,* to confirm whether there is a source that can supply an audit sample for that method. If the EPA Web site does not list an available audit sample at least 60 days prior to the beginning of the compliance test, the source owner, operator, or representative shall not be required to include an audit sample as part of the quality assurance program for the compliance test. When ordering an audit sample, the source owner, operator, or representative shall give the sample provider an estimate for the concentration of each pollutant that is emitted by the source or the estimated concentration of each pollutant based on the permitted level and the name, address, and phone number of the compliance authority. The source owner, operator, or representative shall report the results for the audit sample along with a summary of the emission test results for the audited pollutant to the compliance authority and shall report the results of the audit sample to the AASP. The source owner, operator, or representative shall make both reports at the same time and in the same manner or shall report to the compliance authority first and then report to the AASP. If the method being audited is a method that allows the samples to be analyzed in the field and the tester plans to analyze the samples in the field, the tester may analyze the audit samples prior to collecting the emission samples provided a representative of the compliance authority is present at the testing site. The tester may request and the compliance authority may grant a waiver to the requirement that a representative of the compliance authority must be present at the testing site during the field analysis of an audit sample. The source owner, operator, or representative may report the results of the audit sample to the compliance authority and report the results of the audit sample to the AASP prior to collecting any emission samples. The test protocol and final test report shall document whether an audit sample was ordered and utilized and the pass/fail results as applicable.

(2) An AASP shall have and shall prepare, analyze, and report the true value of audit samples in accordance with a written technical criteria document that describes how audit samples will be prepared and distributed in a manner that will ensure the integrity of the audit sample program. An acceptable technical criteria document shall contain standard operating procedures for all of the following operations:

(i) Preparing the sample;

(ii) Confirming the true concentration of the sample;

(iii) Defining the acceptance limits for the results from a well qualified tester. This procedure must use well established statistical methods to analyze historical results from well qualified testers. The acceptance limits

shall be set so that there is 95 percent confidence that 90 percent of well qualified labs will produce future results that are within the acceptance limit range.

(iv) Providing the opportunity for the compliance authority to comment on the selected concentration level for an audit sample;

(v) Distributing the sample to the user in a manner that guarantees that the true value of the sample is unknown to the user;

(vi) Recording the measured concentration reported by the user and determining if the measured value is within acceptable limits;

(vii) The AASP shall report the results from each audit sample in a timely manner to the compliance authority and then to the source owner, operator, or representative. The AASP shall make both reports at the same time and in the same manner or shall report to the compliance authority first and then report to the source owner, operator, or representative. The results shall include the name of the facility tested, the date on which the compliance test was conducted, the name of the company performing the sample collection, the name of the company that analyzed the compliance samples including the audit sample, the measured result for the audit sample, and whether the testing company passed or failed the audit. The AASP shall report the true value of the audit sample to the compliance authority. The AASP may report the true value to the source owner, operator, or representative if the AASP's operating plan ensures that no laboratory will receive the same audit sample twice.

(viii) Evaluating the acceptance limits of samples at least once every two years to determine in cooperation with the voluntary consensus standard body if they should be changed;

(ix) Maintaining a database, accessible to the compliance authorities, of results from the audit that shall include the name of the facility tested, the date on which the compliance test was conducted, the name of the company performing the sample collection, the name of the company that analyzed the compliance samples including the audit sample, the measured result for the audit sample, the true value of the audit sample, the acceptance range for the measured value, and whether the testing company passed or failed the audit.

(3) The accrediting body shall have a written technical criteria document that describes how it will ensure that the AASP is operating in accordance with the AASP technical criteria document that describes how audit samples are to be prepared and distributed. This document shall contain standard operating procedures for all of the following operations:

(i) Checking audit samples to confirm their true value as reported by the AASP;

(ii) Performing technical systems audits of the AASP's facilities and operating procedures at least once every two years;

(iii) Providing standards for use by the voluntary consensus standard body to approve the accrediting body that will accredit the audit sample providers.

(4) The technical criteria documents for the accredited sample providers and the accrediting body shall be developed through a public process guided by a voluntary consensus standards body (VCSB). The VCSB shall operate in accordance with the procedures and requirements in the Office of Management and Budget Circular A-119. A copy of Circular A-119 is available upon request by writing the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, by calling (202) 395-6880 or downloading online at *http://standards.gov/standards__gov/a119.cfm.* The VCSB shall approve all accrediting bodies. The Administrator will review all technical criteria documents. If the technical criteria documents do not meet the minimum technical requirements in paragraphs (g)(2) through (4)of this section, the technical criteria documents are not acceptable and the proposed audit sample program is not capable of producing audit samples of sufficient

quality to be used in a compliance test. All acceptable technical criteria documents shall be posted on the EPA Web site at the following URL, *http://www.epa.gov/ttn/emc.*

(h) Unless otherwise specified in the applicable subpart, each test location must be verified to be free of cyclonic flow and evaluated for the existence of emission gas stratification and the required number of sampling traverse points. If other procedures are not specified in the applicable subpart to the regulations, use the appropriate procedures in Method 1 to check for cyclonic flow and Method 7E to evaluate emission gas stratification and selection of sampling points.

(i) Whenever the use of multiple calibration gases is required by a test method, performance specification, or quality assurance procedure in a part 60 standard or appendix, Method 205 of 40 CFR part 51, appendix M of this chapter, "Verification of Gas Dilution Systems for Field Instrument Calibrations," may be used.

§ 60.9 Availability of information.

The availability to the public of information provided to, or otherwise obtained by, the Administrator under this part shall be governed by part 2 of this chapter. (Information submitted voluntarily to the Administrator for the purposes of §§ 60.5 and 60.6 is governed by §§ 2.201 through 2.213 of this chapter and not by § 2.301 of this chapter.)

§ 60.10 State authority.

The provisions of this part shall not be construed in any manner to preclude any State or political subdivision thereof from:

(a) Adopting and enforcing any emission standard or limitation applicable to an affected facility, provided that such emission standard or limitation is not less stringent than the standard applicable to such facility.

(b) Requiring the owner or operator of an affected facility to obtain permits, licenses, or approvals prior to initiating construction, modification, or operation of such facility.

§ 60.11 Compliance with standards and maintenance requirements.

(a) Compliance with standards in this part, other than opacity standards, shall be determined in accordance with performance tests established by § 60.8, unless otherwise specified in the applicable standard.

(b) Compliance with opacity standards in this part shall be determined by conducting observations in accordance with Method 9 in appendix A of this part, any alternative method that is approved by the Administrator, or as provided in paragraph (e)(5) of this section. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).

(c) The opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(e)

(1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in § 60.8 unless one of the following conditions apply. If no performance test under § 60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the

initial performance test required under § 60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in § 60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under § 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determing compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in paragraph (e)(5) of this section, the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of this part, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.

(2) Except as provided in paragraph (e)(3) of this section, the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with paragraph (b) of this section, shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under § 60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

(3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in § 60.7(a)(6). If, for some reason, the Administrator cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of paragraph (e)(1) of this section shall apply.

(4) An owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produced during the initial performance test required by § 60.8 and shall furnish the Administrator a written report of the monitoring results along with Method 9 and § 60.8 performance test results.

(5) An owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under § 60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under § 60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under § 60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under § 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under § 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in § 60.13(c) of this part, that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for

compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine compliance with the opacity standard.

(6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by § 60.8, the opacity observation results and observer certification required by § 60.11(e)(1), and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by § 60.8. If the Administrator finds that an affected facility is in compliance with all applicable standards for which performance tests are conducted in accordance with § 60.8 of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, he shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.

(7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emissions during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.

(8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the Federal Register.

(f) Special provisions set forth under an applicable subpart shall supersede any conflicting provisions in paragraphs (a) through (e) of this section.

(g) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

§ 60.12 Circumvention.

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

§ 60.13 Monitoring requirements.

(a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B to this part and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to this part, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

(b) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under § 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

(c) If the owner or operator of an affected facility elects to submit continous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under § 60.11(e)(5), he shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of this part before the performance test required under § 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance

evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under § 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of this part, The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under § 60.8 and as described in § 60.11(e)(5) shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in paragraph (c) of this section at least 10 days before the performance test required under § 60.8 is conducted.

(2) Except as provided in paragraph (c)(1) of this section, the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

(d)

(1) Owners and operators of a CEMS installed in accordance with the provisions of this part, must check the zero (or low level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once each operating day in accordance with a written procedure. The zero and span must, at a minimum, be adjusted whenever either the 24-hour zero drift or the 24-hour span drift exceeds two times the limit of the applicable performance specification in appendix B of this part. The system must allow the amount of the excess zero and span drift to be recorded and quantified whenever specified. Owners and operators of a COMS installed in accordance with the provisions of this part must check the zero and upscale (span) calibration drifts at least once daily. For a particular COMS, the acceptable range of zero and upscale calibration materials is defined in the applicable version of PS-1 in appendix B of this part. For a COMS, the optical surfaces, exposed to the effluent gases, must be cleaned before performing the zero and upscale drift adjustments, except for systems using automatic zero adjustments. The optical surfaces must be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

(2) Unless otherwise approved by the Administrator, the following procedures must be followed for a COMS. Minimum procedures must include an automated method for producing a simulated zero opacity condition and an upscale opacity condition using a certified neutral density filter or other related technique to produce a known obstruction of the light beam. Such procedures must provide a system check of all active analyzer internal optics with power or curvature, all active electronic circuitry including the light source and photodetector assembly, and electronic or electro-mechanical systems and hardware and or software used during normal measurement operation.

(e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(1) All continuous monitoring systems referenced by paragraph (c) of this section for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(2) All continuous monitoring systems referenced by paragraph (c) of this section for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of this part shall be used.

(g) When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.

(h)

(1) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in § 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period.

(2) For continuous monitoring systems other than opacity, 1-hour averages shall be computed as follows, except that the provisions pertaining to the validation of partial operating hours are only applicable for affected facilities that are required by the applicable subpart to include partial hours in the emission calculations:

(i) Except as provided under paragraph (h)(2)(iii) of this section, for a full operating hour (any clock hour with 60 minutes of unit operation), at least four valid data points are required to calculate the hourly average, *i.e.*, one data point in each of the 15-minute quadrants of the hour.

(ii) Except as provided under paragraph (h)(2)(iii) of this section, for a partial operating hour (any clock hour with less than 60 minutes of unit operation), at least one valid data point in each 15-minute quadrant of the hour in which the unit operates is required to calculate the hourly average.

(iii) For any operating hour in which required maintenance or quality-assurance activities are performed:

(A) If the unit operates in two or more quadrants of the hour, a minimum of two valid data points, separated by at least 15 minutes, is required to calculate the hourly average; or

(B) If the unit operates in only one quadrant of the hour, at least one valid data point is required to calculate the hourly average.

(iv) If a daily calibration error check is failed during any operating hour, all data for that hour shall be invalidated, unless a subsequent calibration error test is passed in the same hour and the requirements of paragraph (h)(2)(iii) of this section are met, based solely on valid data recorded after the successful calibration.

(v) For each full or partial operating hour, all valid data points shall be used to calculate the hourly average.

(vi) Except as provided under paragraph (h)(2)(vii) of this section, data recorded during periods of continuous monitoring system breakdown, repair, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph.

(vii) Owners and operators complying with the requirements of § 60.7(f)(1) or (2) must include any data recorded during periods of monitor breakdown or malfunction in the data averages.

(viii) When specified in an applicable subpart, hourly averages for certain partial operating hours shall not be computed or included in the emission averages (e.g., hours with < 30 minutes of unit operation under § 60.47b(d)).

(ix) Either arithmetic or integrated averaging of all data may be used to calculate the hourly averages. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant).

(3) All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in the applicable subpart. After conversion into units of the standard, the data may be rounded to the same number of significant digits used in the applicable subpart to specify the emission limit.

(i) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of this part including, but not limited to the following:

(1) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by this part would not provide accurate measurements due to liquid water or other interferences caused by substances in the effluent gases.

(2) Alternative monitoring requirements when the affected facility is infrequently operated.

(3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.

(4) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.

(5) Alternative methods of converting pollutant concentration measurements to units of the standards.

(6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.

(7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.

(8) Alternative continuous monitoring systems that do not meet the design or performance requirements in Performance Specification 1, appendix B, but adequately demonstrate a definite and consistent relationship between its measurements and the measurements of opacity by a system complying with the requirements in Performance Specification 1. The Administrator may require that such demonstration be performed for each affected facility.

(9) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities is released to the atmosphere through more than one point.

(j) An alternative to the relative accuracy (RA) test specified in Performance Specification 2 of appendix B may be requested as follows:

(1) An alternative to the reference method tests for determining RA is available for sources with emission rates demonstrated to be less than 50 percent of the applicable standard. A source owner or operator may petition the Administrator to waive the RA test in Section 8.4 of Performance Specification 2 and substitute the procedures in Section 16.0 if the results of a performance test conducted according to the requirements in § 60.8 of this subpart or other tests performed following the criteria in § 60.8 demonstrate that the emission rate of the pollutant of interest in the units of the applicable standard is less than 50 percent of the applicable standard. For sources subject to standards expressed as control efficiency levels, a source owner or operator may petition the Administrator to waive the RA test and substitute the procedures in Section 16.0 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the continuous emission monitoring system is used to determine compliance continuously with the applicable standard. The petition to waive the RA test shall include a detailed description of the procedures to be applied. Included shall be location and procedure for conducting the alternative, the concentration or response levels of the alternative RA materials, and the other equipment checks included in the

alternative procedure. The Administrator will review the petition for completeness and applicability. The determination to grant a waiver will depend on the intended use of the CEMS data (e.g., data collection purposes other than NSPS) and may require specifications more stringent than in Performance Specification 2 (e.g., the applicable emission limit is more stringent than NSPS).

(2) The waiver of a CEMS RA test will be reviewed and may be rescinded at such time, following successful completion of the alternative RA procedure, that the CEMS data indicate that the source emissions are approaching the level. The criterion for reviewing the waiver is the collection of CEMS data showing that emissions have exceeded 70 percent of the applicable standard for seven, consecutive, averaging periods as specified by the applicable regulation(s). For sources subject to standards expressed as control efficiency levels, the criterion for reviewing the waiver is the collection of CEMS data showing that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for seven, consecutive, averaging periods as specified by the applicable regulation(s) [e.g., §§ 60.45(g) (2) and (3), 60.73(e), and 60.84(e)]. It is the responsibility of the source operator to maintain records and determine the level of emissions relative to the criterion on the waiver of RA testing. If this criterion is exceeded, the owner or operator must notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increasing emissions. The Administrator will review the notification and may rescind the waiver and require the owner or operator to conduct a RA test of the CEMS as specified in Section 8.4 of Performance Specification 2.

Editorial Note

Editorial Note: For Federal Register citations affecting § 60.13, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.govinfo.gov.*

§ 60.14 Modification.

(a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.

(b) Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:

(1) Emission factors as specified in the latest issue of “Compilation of Air Pollutant Emission Factors,” EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrates that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.

(2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in paragraph (b)(1) of this section does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in paragraph (b)(1) of this section. When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in appendix C of this part shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.

(c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.

(d) [Reserved]

(e) The following shall not, by themselves, be considered modifications under this part:

(1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of paragraph (c) of this section and § 60.15.

(2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.

(3) An increase in the hours of operation.

(4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by § 60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.

(5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.

(6) The relocation or change in ownership of an existing facility.

(f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.

(g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in paragraph (a) of this section, compliance with all applicable standards must be achieved.

(h) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for the purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the 5 years prior to the change.

(i) Repowering projects that are awarded funding from the Department of Energy as permanent clean coal technology demonstration projects (or similar projects funded by EPA) are exempt from the requirements of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.

(j)

(1) Repowering projects that qualify for an extension under section 409(b) of the Clean Air Act are exempt from the requirements of this section, provided that such change does not increase the actual hourly emissions of any pollutant regulated under this section above the actual hourly emissions achievable at that unit during the 5 years prior to the change.

(2) This exemption shall not apply to any new unit that:

(i) Is designated as a replacement for an existing unit;

(ii) Qualifies under section 409(b) of the Clean Air Act for an extension of an emission limitation compliance date under section 405 of the Clean Air Act; and

(iii) Is located at a different site than the existing unit.

(k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. A *temporary clean coal control technology demonstration project,* for the purposes of this section is a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(l) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.

§ 60.15 Reconstruction.

(a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.

(b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and

(2) It is technologically and economically feasible to meet the applicable standards set forth in this part.

(c) "Fixed capital cost" means the capital needed to provide all the depreciable components.

(d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:

(1) Name and address of the owner or operator.

(2) The location of the existing facility.

(3) A brief description of the existing facility and the components which are to be replaced.

(4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.

(5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.

(6) The estimated life of the existing facility after the replacements.

(7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

(e) The Administrator will determine, within 30 days of the receipt of the notice required by paragraph (d) of this section and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.

(f) The Administrator's determination under paragraph (e) shall be based on:

(1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;

(2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;

(3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and

(4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.

(g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.

§ 60.16 Priority list.

Prioritized Major Source Categories	
Priority Number[1]	*Source Category*
1.	Synthetic Organic Chemical Manufacturing Industry (SOCMI) and Volatile Organic Liquid Storage Vessels and Handling Equipment
	(a) SOCMI unit processes
	(b) Volatile organic liquid (VOL) storage vessels and handling equipment
	(c) SOCMI fugitive sources
	(d) SOCMI secondary sources
2.	Industrial Surface Coating: Cans
3.	Petroleum Refineries: Fugitive Sources
4.	Industrial Surface Coating: Paper
5.	Dry Cleaning
	(a) Perchloroethylene
	(b) Petroleum solvent
6.	Graphic Arts
7.	Polymers and Resins: Acrylic Resins
8.	Mineral Wool (Deleted)
9.	Stationary Internal Combustion Engines
10.	Industrial Surface Coating: Fabric
11.	Industrial-Commercial-Institutional Steam Generating Units.
12.	Incineration: Non-Municipal (Deleted)
13.	Non-Metallic Mineral Processing
14.	Metallic Mineral Processing
15.	Secondary Copper (Deleted)
16.	Phosphate Rock Preparation
17.	Foundries: Steel and Gray Iron

Prioritized Major Source Categories	
Priority Number[1]	*Source Category*
18.	Polymers and Resins: Polyethylene
19.	Charcoal Production
20.	Synthetic Rubber
	(a) Tire manufacture
	(b) SBR production
21.	Vegetable Oil
22.	Industrial Surface Coating: Metal Coil
23.	Petroleum Transportation and Marketing
24.	By-Product Coke Ovens
25.	Synthetic Fibers
26.	Plywood Manufacture
27.	Industrial Surface Coating: Automobiles
28.	Industrial Surface Coating: Large Appliances
29.	Crude Oil and Natural Gas Production
30.	Secondary Aluminum
31.	Potash (Deleted)
32.	Lightweight Aggregate Industry: Clay, Shale, and Slate[2]
33.	Glass
34.	Gypsum
35.	Sodium Carbonate
36.	Secondary Zinc (Deleted)
37.	Polymers and Resins: Phenolic
38.	Polymers and Resins: Urea-Melamine
39.	Ammonia (Deleted)
40.	Polymers and Resins: Polystyrene
41.	Polymers and Resins: ABS-SAN Resins

Prioritized Major Source Categories	
Priority Number[1]	*Source Category*
42.	Fiberglass
43.	Polymers and Resins: Polypropylene
44.	Textile Processing
45.	Asphalt Processing and Asphalt Roofing Manufacture
46.	Brick and Related Clay Products
47.	Ceramic Clay Manufacturing (Deleted)
48.	Ammonium Nitrate Fertilizer
49.	Castable Refractories (Deleted)
50.	Borax and Boric Acid (Deleted)
51.	Polymers and Resins: Polyester Resins
52.	Ammonium Sulfate
53.	Starch
54.	Perlite
55.	Phosphoric Acid: Thermal Process (Deleted)
56.	Uranium Refining
57.	Animal Feed Defluorination (Deleted)
58.	Urea (for fertilizer and polymers)
59.	Detergent (Deleted)
Other Source Categories	
Lead acid battery manufacture[3]	
Organic solvent cleaning[3]	
Industrial surface coating: metal furniture[3]	
Stationary gas turbines[4]	
Municipal solid waste landfills[4]	

[1] Low numbers have highest priority, e.g., No. 1 is high priority, No. 59 is low priority.

[2] Formerly titled “Sintering: Clay and Fly Ash”.

Prioritized Major Source Categories	
Priority Number[1]	*Source Category*
[3] Minor source category, but included on list since an NSPS is being developed for that source category.	
[4] Not prioritized, since an NSPS for this major source category has already been promulgated.	

§ 60.17 Incorporations by reference.

(a)

(1) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the U.S. Environmental Protection Agency (EPA) must publish a document in the Federal Register and the material must be available to the public. All approved incorporation by reference (IBR) material is available for inspection at the EPA and at the National Archives and Records Administration (NARA). Contact the EPA at: EPA Docket Center, Public Reading Room, EPA WJC West, Room 3334, 1301 Constitution Ave. NW, Washington, DC; phone: (202) 566-1744. For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations* or email *fr.inspection@nara.gov*.

(2) The IBR material may be obtained from the sources in the following paragraphs of this section or from one or more private resellers listed in this paragraph (a)(2). For material that is no longer commercially available, contact: the EPA (see paragraph (a)(1) of this section).

(i) Accuris Standards Store, 321 Inverness Drive, South Englewood, CO 80112; phone: (800) 332-6077; website: *https://store.accuristech.com*.

(ii) American National Standards Institute (ANSI), see paragraph (d) of this section.

(iii) GlobalSpec, 257 Fuller Road, Suite NFE 1100, Albany, NY 12203-3621; phone: (800) 261-2052; website: *https://standards.globalspec.com*.

(iv) Nimonik Document Center, 401 Roland Way, Suite 224, Oakland, CA 94624; phone (650) 591-7600; email: *info@document-center.com*; website: *www.document-center.com*.

(v) Techstreet, phone: (855) 999-9870; email: *store@techstreet.com*; website: *www.techstreet.com*.

(b) American Gas Association, available through ILI Infodisk, 610 Winters Avenue, Paramus, New Jersey 07652:

(1) American Gas Association Report No. 3: Orifice Metering for Natural Gas and Other Related Hydrocarbon Fluids, Part 1: General Equations and Uncertainty Guidelines (1990), IBR approved for § 60.107a(d).

(2) American Gas Association Report No. 3: Orifice Metering for Natural Gas and Other Related Hydrocarbon Fluids, Part 2: Specification and Installation Requirements (2000), IBR approved for § 60.107a(d).

(3) American Gas Association Report No. 11: Measurement of Natural Gas by Coriolis Meter (2003), IBR approved for § 60.107a(d).

(4) American Gas Association Transmission Measurement Committee Report No. 7: Measurement of Gas by Turbine Meters (Revised February 2006), IBR approved for § 60.107a(d).

(c) American Hospital Association (AHA) Service, Inc., Post Office Box 92683, Chicago, Illinois 60675-2683.

(1) An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities. American Society for Health Care Environmental Services of the American Hospital Association. Chicago, Illinois. 1993. AHA Catalog No. 057007. ISBN 0-87258-673-5. IBR approved for §§ 60.35e and 60.55c.

(2) [Reserved]

(d) American National Standards Institute (ANSI), 25 West 43rd Street, Fourth Floor, New York, NY 10036-7417; phone: (212) 642-4980; email: *info@ansi.org*; website: *www.ansi.org*.

(1) ANSI No. C12.20-2010 American National Standard for Electricity Meters—0.2 and 0.5 Accuracy Classes (Approved August 31, 2010); IBR approved for §§ 60.5535(d); 60.5535a(d); 60.5860b(a).

(2) [Reserved]

(e) American Petroleum Institute (API), 200 Massachusetts Ave. NW, Suite 1100, Washington, DC 20001; phone: (202) 682-8000; website: *www.api.org*.

(1) API Publication 2517, Evaporation Loss from External Floating Roof Tanks, Second Edition, February 1980, IBR approved for §§ 60.111(i), 60.111a(f), and 60.116b(e).

(2) API Manual of Petroleum Measurement Standards, Chapter 14—Natural Gas Fluids Measurement, Section 1—Collecting and Handling of Natural Gas Samples for Custody Transfer, 7th Edition, May 2016, IBR approved for § 60.4415(a).

(3) API Manual of Petroleum Measurement Standards, Chapter 22—Testing Protocol, Section 2—Differential Pressure Flow Measurement Devices, First Edition, August 2005, IBR approved for § 60.107a(d).

(f) American Public Health Association, 1015 18th Street NW., Washington, DC 20036.

(1) "Standard Methods for the Examination of Water and Wastewater," 16th edition, 1985. Method 303F: "Determination of Mercury by the Cold Vapor Technique." Incorporated by reference for appendix A-8 to part 60, Method 29, §§ 9.2.3, 10.3, and 11.1.3.

(2) 2540 G. Total, Fixed, and Volatile Solids in Solid and Semisolid Samples, in Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, IBR approved for § 60.154(b).

(g) American Society of Mechanical Engineers (ASME), Two Park Avenue, New York, NY 10016-5990; phone: (800) 843-2763; email: *CustomerCare@asme.org;* website: *www.asme.org.*

(1) ASME Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th Edition (1971), IBR approved for §§ 60.58a(h), 60.58b(i), 60.1320(a), and 60.1810(a).

(2) ASME MFC-3M-2004, Measurement of Fluid Flow in Pipes Using Orifice, Nozzle, and Venturi, IBR approved for § 60.107a(d).

(3) ASME/ANSI MFC-4M-1986 (Reaffirmed 2008), Measurement of Gas Flow by Turbine Meters, IBR approved for § 60.107a(d).

(4) ASME/ANSI MFC-5M-1985 (Reaffirmed 2006), Measurement of Liquid Flow in Closed Conduits Using Transit-Time Ultrasonic Flowmeters, IBR approved for § 60.107a(d).

(5) ASME MFC-6M-1998 (Reaffirmed 2005), Measurement of Fluid Flow in Pipes Using Vortex Flowmeters, IBR approved for § 60.107a(d).

(6) ASME/ANSI MFC-7M-1987 (Reaffirmed 2006), Measurement of Gas Flow by Means of Critical Flow Venturi Nozzles, IBR approved for § 60.107a(d).

(7) ASME/ANSI MFC-9M-1988 (Reaffirmed 2006), Measurement of Liquid Flow in Closed Conduits by Weighing Method, IBR approved for § 60.107a(d).

(8) ASME MFC-11M-2006, Measurement of Fluid Flow by Means of Coriolis Mass Flowmeters, IBR approved for § 60.107a(d).

(9) ASME MFC-14M-2003, Measurement of Fluid Flow Using Small Bore Precision Orifice Meters, IBR approved for § 60.107a(d).

(10) ASME MFC-16-2007, Measurement of Liquid Flow in Closed Conduits with Electromagnetic Flowmeters, IBR approved for § 60.107a(d).

(11) ASME MFC-18M-2001, Measurement of Fluid Flow Using Variable Area Meters, IBR approved for § 60.107a(d).

(12) ASME MFC-22-2007, Measurement of Liquid by Turbine Flowmeters, IBR approved for § 60.107a(d).

(13) ASME PTC 4.1-1964 (Reaffirmed 1991), Power Test Codes: Test Code for Steam Generating Units (with 1968 and 1969 Addenda), IBR approved for §§ 60.46b, 60.58a(h), 60.58b(i), 60.1320(a), and 60.1810(a).

(14) ASME/ANSI PTC 19.10-1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], Issued August 31, 1981; IBR approved for §§ 60.56c(b); 60.63(f); 60.106(e); 60.104a(d), (h), (i), and (j); 60.105a(b), (d), (f), and (g); 60.106a(a); 60.107a(a), (c), and (d); 60.275(e); 60.275a(e); 60.275b(e); tables 1 and 3 to subpart EEEE; tables 2 and 4 to subpart FFFF; table 2 to subpart JJJJ; §§ 60.285a(f); 60.396(a); 60.614a(b); 60.664a(b); 60.704(b); 60.704a(b); 60.2145(s) and (t); 60.2710(s) and (t); 60.2730(q); 60.4415(a); 60.4900(b); 60.5220(b); tables 1 and 2 to subpart LLLL; tables 2 and 3 to subpart MMMM; §§ 60.5406(c); 60.5406a(c); 60.5406b(c); 60.5407a(g); 60.5407b(g); 60.5413(b); 60.5413a(b) and (d); 60.5413b(d) and (d); 60.5413c(b) and (d).

(15) ASME PTC 22-2014, Gas Turbines: Performance Test Codes, (Issued December 31, 2014); IBR approved for §§ 60.5580; 60.5580a.

(16) ASME PTC 46-1996, Performance Test Code on Overall Plant Performance, (Issued October 15,1997); IBR approved for §§ 60.5580; 60.5580a.

(17) ASME QRO-1-1994, Standard for the Qualification and Certification of Resource Recovery Facility Operators, IBR approved for §§ 60.54b(a) and (b), 60.56a, 60.1185(a) and (c), and 60.1675(a) and (c).

(h) ASTM International, 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-2959; phone: (800) 262-1373; website: *www.astm.org.*

(1) ASTM A99-76, Standard Specification for Ferromanganese, IBR approved for § 60.261.

(2) ASTM A99-82 (Reapproved 1987), Standard Specification for Ferromanganese, IBR approved for § 60.261.

(3) ASTM A100-69, Standard Specification for Ferrosilicon, IBR approved for § 60.261.

(4) ASTM A100-74, Standard Specification for Ferrosilicon, IBR approved for § 60.261.

(5) ASTM A100-93, Standard Specification for Ferrosilicon, IBR approved for § 60.261.

(6) ASTM A101-73, Standard Specification for Ferrochromium, IBR approved for § 60.261.

(7) ASTM A101-93, Standard Specification for Ferrochromium, IBR approved for § 60.261.

(8) ASTM A482-76, Standard Specification for Ferrochromesilicon, IBR approved for § 60.261.

(9) ASTM A482-93, Standard Specification for Ferrochromesilicon, IBR approved for § 60.261.

(10) ASTM A483-64, Standard Specification for Silicomanganese, IBR approved for § 60.261.

(11) ASTM A483-74 (Reapproved 1988), Standard Specification for Silicomanganese, IBR approved for § 60.261.

(12) ASTM A495-76, Standard Specification for Calcium-Silicon and Calcium Manganese-Silicon, IBR approved for § 60.261.

(13) ASTM A495-94, Standard Specification for Calcium-Silicon and Calcium Manganese-Silicon, IBR approved for § 60.261.

(14) ASTM D86-78, Distillation of Petroleum Products, IBR approved for §§ 60.562-2(d), 60.593(d), 60.593a(d), 60.633(h).

(15) ASTM D86-82, Distillation of Petroleum Products, IBR approved for §§ 60.562-2(d), 60.593(d), 60.593a(d), 60.633(h).

(16) ASTM D86-90, Distillation of Petroleum Products, IBR approved for §§ 60.562-2(d), 60.593(d), 60.593a(d), 60.633(h).

(17) ASTM D86-93, Distillation of Petroleum Products, IBR approved for §§ 60.562-2(d), 60.593(d), 60.593a(d), 60.633(h).

(18) ASTM D86-95, Distillation of Petroleum Products, IBR approved for §§ 60.562-2(d), 60.593(d), 60.593a(d), 60.633(h).

(19) ASTM D86-96, Distillation of Petroleum Products, approved April 10, 1996; IBR approved for §§ 60.562-2(d). 60.593(d). 60.593a(d); 60.633(h); 60.5401(f); 60.5401a(f); 60.5402b(d); 60.5402c(d).

(20) ASTM D129-64, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for §§ 60.106(j) and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(21) ASTM D129-78, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for §§ 60.106(j) and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(22) ASTM D129-95, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for §§ 60.106(j) and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(23) ASTM D129-00, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for § 60.335(b).

(24) ASTM D129-00 (Reapproved 2005), Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for § 60.4415(a).

(25) ASTM D240-76, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, IBR approved for §§ 60.46(c), 60.296(b), and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(26) ASTM D240-92, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, IBR approved for §§ 60.46(c), 60.296(b), and appendix A-7: Method 19, Section 12.5.2.2.3.

(27) ASTM D240-02 (Reapproved 2007), Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, (Approved May 1, 2007), IBR approved for § 60.107a(d).

(28) ASTM D240-19, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, approved November 1, 2019; IBR approved for § 60.485b(g).

(29) ASTM D270-65, Standard Method of Sampling Petroleum and Petroleum Products, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.2.1.

(30) ASTM D270-75, Standard Method of Sampling Petroleum and Petroleum Products, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.2.1.

(31) ASTM D323-82, Test Method for Vapor Pressure of Petroleum Products (Reid Method), IBR approved for §§ 60.111(l), 60.111a(g), 60.111b, and 60.116b(f).

(32) ASTM D323-94, Test Method for Vapor Pressure of Petroleum Products (Reid Method), IBR approved for §§ 60.111(l), 60.111a(g), 60.111b, and 60.116b(f).

(33) ASTM D388-77, Standard Specification for Classification of Coals by Rank, IBR approved for §§ 60.41, 60.45(f), 60.41Da, 60.41b, 60.41c, and 60.251.

(34) ASTM D388-90, Standard Specification for Classification of Coals by Rank, IBR approved for §§ 60.41, 60.45(f), 60.41Da, 60.41b, 60.41c, and 60.251.

(35) ASTM D388-91, Standard Specification for Classification of Coals by Rank, IBR approved for §§ 60.41, 60.45(f), 60.41Da, 60.41b, 60.41c, and 60.251.

(36) ASTM D388-95, Standard Specification for Classification of Coals by Rank, IBR approved for §§ 60.41, 60.45(f), 60.41Da, 60.41b, 60.41c, and 60.251.

(37) ASTM D388-98a, Standard Specification for Classification of Coals by Rank, IBR approved for §§ 60.41, 60.45(f), 60.41Da, 60.41b, 60.41c, and 60.251.

(38) ASTM D388-99 (Reapproved 2004)$^{\varepsilon 1}$(ASTM D388-99R04), Standard Classification of Coals by Rank, (Approved June 1, 2004); IBR approved for §§ 60.41; 60.45(f); 60.41Da; 60.41b; 60.41c; 60.251; 60.5580; 60.5580a.

(39) ASTM D396-78, Standard Specification for Fuel Oils, IBR approved for §§ 60.41b, 60.41c, 60.111(b), and 60.111a(b).

(40) ASTM D396-89, Standard Specification for Fuel Oils, IBR approved for §§ 60.41b, 60.41c, 60.111(b), and 60.111a(b).

(41) ASTM D396-90, Standard Specification for Fuel Oils, IBR approved for §§ 60.41b, 60.41c, 60.111(b), and 60.111a(b).

(42) ASTM D396-92, Standard Specification for Fuel Oils, IBR approved for §§ 60.41b, 60.41c, 60.111(b), and 60.111a(b).

(43) ASTM D396-98, Standard Specification for Fuel Oils, (Approved April 10, 1998); IBR approved for §§ 60.41b; 60.41c; 60.111(b); 60.111a(b); 60.5580; 60.5580a.

(44) ASTM D975-78, Standard Specification for Diesel Fuel Oils, IBR approved for §§ 60.111(b) and 60.111a(b).

(45) ASTM D975-96, Standard Specification for Diesel Fuel Oils, IBR approved for §§ 60.111(b) and 60.111a(b).

(46) ASTM D975-98a, Standard Specification for Diesel Fuel Oils, IBR approved for §§ 60.111(b) and 60.111a(b).

(47) ASTM D975-08a, Standard Specification for Diesel Fuel Oils, (Approved October 1, 2008); IBR approved for §§ 60.41b; 60.41c; 60.5580; 60.5580a.

(48) ASTM D1072-80, Standard Test Method for Total Sulfur in Fuel Gases, IBR approved for § 60.335(b).

(49) ASTM D1072-90 (Reapproved 1994), Standard Test Method for Total Sulfur in Fuel Gases, IBR approved for § 60.335(b).

(50) ASTM D1072-90 (Reapproved 1999), Standard Test Method for Total Sulfur in Fuel Gases, IBR approved for § 60.4415(a).

(51) ASTM D1137-53, Standard Method for Analysis of Natural Gases and Related Types of Gaseous Mixtures by the Mass Spectrometer, IBR approved for § 60.45(f).

(52) ASTM D1137-75, Standard Method for Analysis of Natural Gases and Related Types of Gaseous Mixtures by the Mass Spectrometer, IBR approved for § 60.45(f).

(53) ASTM D1193-77, Standard Specification for Reagent Water, IBR approved for appendix A-3 to part 60: Method 5, Section 7.1.3; Method 5E, Section 7.2.1; Method 5F, Section 7.2.1; appendix A-4 to part 60: Method 6, Section 7.1.1; Method 7, Section 7.1.1; Method 7C, Section 7.1.1; Method 7D, Section 7.1.1; Method 10A, Section 7.1.1; appendix A-5 to part 60: Method 11, Section 7.1.3; Method 12, Section 7.1.3; Method 13A, Section 7.1.2; appendix A-8 to part 60: Method 26, Section 7.1.2; Method 26A, Section 7.1.2; and Method 29, Section 7.2.2.

(54) ASTM D1193-91, Standard Specification for Reagent Water, IBR approved for appendix A-3 to part 60: Method 5, Section 7.1.3; Method 5E, Section 7.2.1; Method 5F, Section 7.2.1; appendix A-4 to part 60: Method 6, Section 7.1.1; Method 7, Section 7.1.1; Method 7C, Section 7.1.1; Method 7D, Section 7.1.1; Method 10A, Section 7.1.1; appendix A-5 to part 60: Method 11, Section 7.1.3; Method 12, Section 7.1.3; Method 13A, Section 7.1.2; appendix A-8 to part 60: Method 26, Section 7.1.2; Method 26A, Section 7.1.2; and Method 29, Section 7.2.2.

(55) ASTM D1266-87, Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for §§ 60.106(j) and 60.335(b).

(56) ASTM D1266-91, Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for §§ 60.106(j) and 60.335(b).

(57) ASTM D1266-98, Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for §§ 60.106(j) and 60.335(b).

(58) ASTM D1266-98 (Reapproved 2003)$^{\varepsilon,1}$ Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for § 60.4415(a).

(59) ASTM D1475-60 (Reapproved 1980), Standard Test Method for Density of Paint, Varnish Lacquer, and Related Products, IBR approved for § 60.435(d), appendix A-7 to part 60: Method 24, Section 6.1; and Method 24A, Sections 6.5 and 7.1.

(60) ASTM D1475-90, Standard Test Method for Density of Paint, Varnish Lacquer, and Related Products, IBR approved for § 60.435(d), appendix A-7 to part 60: Method 24, Section 6.1; and Method 24A, §§ 6.5 and 7.1.

(61) ASTM D1475-13, Standard Test Method for Density of Liquid Coatings, Inks, and Related Products, Approved November 1, 2013; IBR approved for § 60.393a(f).

(62) ASTM D1552-83, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), IBR approved for §§ 60.106(j), 60.335(b), and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(63) ASTM D1552-95, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), IBR approved for §§ 60.106(j), 60.335(b), and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(64) ASTM D1552-01, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), IBR approved for §§ 60.106(j), 60.335(b), and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(65) ASTM D1552-03, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), IBR approved for § 60.4415(a).

(66) ASTM D1826-77, Standard Test Method for Calorific Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, IBR approved for §§ 60.45(f), 60.46(c), 60.296(b), and appendix A-7 to part 60: Method 19, Section 12.3.2.4.

(67) ASTM D1826-94, Standard Test Method for Calorific Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, IBR approved for §§ 60.45(f), 60.46(c), 60.296(b), and appendix A-7 to part 60: Method 19, Section 12.3.2.4.

(68) ASTM D1826-94 (Reapproved 2003), Standard Test Method for Calorific (Heating) Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, (Approved May 10, 2003), IBR approved for § 60.107a(d).

(69) ASTM D1835-87, Standard Specification for Liquefied Petroleum (LP) Gases, IBR approved for §§ 60.41Da, 60.41b, and 60.41c.

(70) ASTM D1835-91, Standard Specification for Liquefied Petroleum (LP) Gases, IBR approved for §§ 60.41Da, 60.41b, and 60.41c.

(71) ASTM D1835-97, Standard Specification for Liquefied Petroleum (LP) Gases, IBR approved for §§ 60.41Da, 60.41b, and 60.41c.

(72) ASTM D1835-03a, Standard Specification for Liquefied Petroleum (LP) Gases, IBR approved for §§ 60.41Da, 60.41b, and 60.41c.

(73) ASTM D1945-64, Standard Method for Analysis of Natural Gas by Gas Chromatography, IBR approved for § 60.45(f).

(74) ASTM D1945-76, Standard Method for Analysis of Natural Gas by Gas Chromatography, IBR approved for § 60.45(f).

(75) ASTM D1945-91, Standard Method for Analysis of Natural Gas by Gas Chromatography, IBR approved for § 60.45(f).

(76) ASTM D1945-96, Standard Method for Analysis of Natural Gas by Gas Chromatography, IBR approved for § 60.45(f).

(77) ASTM D1945-03 (Reapproved 2010), Standard Method for Analysis of Natural Gas by Gas Chromatography, approved January 1, 2010; IBR approved for §§ 60.107a(d); 60.5413(d); 60.5413a(d); 60.5413b(d); 60.5413c(d).

(78) ASTM D1945-14 (Reapproved 2019), Standard Test Method for Analysis of Natural Gas by Gas Chromatography, approved December 1, 2019; IBR approved for § 60.485b(g).

(79) ASTM D1946-77, Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for §§ 60.18(f), 60.45(f), 60.564(f), 60.614(e), 60.664(e), and 60.704(d).

(80) ASTM D1946-90 (Reapproved 1994), Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for §§ 60.18(f), 60.45(f), 60.564(f), 60.614(e), 60.664(e), and 60.704(d).

(81) ASTM D1946-90 (Reapproved 2006), Standard Method for Analysis of Reformed Gas by Gas Chromatography, (Approved June 1, 2006), IBR approved for § 60.107a(d).

(82) ASTM D2013-72, Standard Method of Preparing Coal Samples for Analysis, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(83) ASTM D2013-86, Standard Method of Preparing Coal Samples for Analysis, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(84) ASTM D2015-77 (Reapproved 1978), Standard Test Method for Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter, IBR approved for §§ 60.45(f), 60.46(c), and appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(85) ASTM D2015-96, Standard Test Method for Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter, IBR approved for §§ 60.45(f), 60.46(c), and appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(86) ASTM D2016-74, Standard Test Methods for Moisture Content of Wood, IBR approved for appendix A-8 to part 60: Method 28, Section 16.1.1.

(87) ASTM D2016-83, Standard Test Methods for Moisture Content of Wood, IBR approved for appendix A-8 to part 60: Method 28, Section 16.1.1.

(88) ASTM D2234-76, Standard Methods for Collection of a Gross Sample of Coal, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.1.

(89) ASTM D2234-96, Standard Methods for Collection of a Gross Sample of Coal, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.1.

(90) ASTM D2234-97b, Standard Methods for Collection of a Gross Sample of Coal, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.1.

(91) ASTM D2234-98, Standard Methods for Collection of a Gross Sample of Coal, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.1.

(92) ASTM D2369-81, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-7 to part 60: Method 24, Section 6.2.

(93) ASTM D2369-87, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-7 to part 60: Method 24, Section 6.2.

(94) ASTM D2369-90, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-7 to part 60: Method 24, Section 6.2.

(95) ASTM D2369-92, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-7 to part 60: Method 24, Section 6.2.

(96) ASTM D2369-93, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-7 to part 60: Method 24, Section 6.2.

(97) ASTM D2369-95, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-7 to part 60: Method 24, Section 6.2.

(98) ASTM D2369-10 (Reapproved 2015)e1, Standard Test Method for Volatile Content of Coatings, (Approved June 1, 2015); IBR approved for appendix A-7 to part 60: Method 24, Section 6.2.

(99) ASTM D2369-20, Standard Test Method for Volatile Content of Coatings, Approved June 1, 2020; IBR approved for §§ 60.393a(f); 60.723(b); 60.724(a); 60.725(b); 60.723a(b); 60.724a(a); 60.725a(b).

(100) ASTM D2382-76, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for §§ 60.18(f), 60.485(g), 60.485a(g), 60.564(f), 60.614(e), 60.664(e), and 60.704(d).

(101) ASTM D2382-88, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for §§ 60.18(f), 60.485(g), 60.485a(g), 60.564(f), 60.614(e), 60.664(e), and 60.704(d).

(102) ASTM D2504-67, Noncondensable Gases in C3 and Lighter Hydrocarbon Products by Gas Chromatography, IBR approved for §§ 60.485(g) and 60.485a(g).

(103) ASTM D2504-77, Noncondensable Gases in C3 and Lighter Hydrocarbon Products by Gas Chromatography, IBR approved for §§ 60.485(g) and 60.485a(g).

(104) ASTM D2504-88 (Reapproved 1993), Noncondensable Gases in C3 and Lighter Hydrocarbon Products by Gas Chromatography, IBR approved for §§ 60.485(g) and 60.485a(g).

(105) ASTM D2584-68(Reapproved 1985), Standard Test Method for Ignition Loss of Cured Reinforced Resins, IBR approved for § 60.685(c).

(106) ASTM D2584-94, Standard Test Method for Ignition Loss of Cured Reinforced Resins, IBR approved for § 60.685(c).

(107) ASTM D2597-94 (Reapproved 1999), Standard Test Method for Analysis of Demethanized Hydrocarbon Liquid Mixtures Containing Nitrogen and Carbon Dioxide by Gas Chromatography, IBR approved for § 60.335(b).

(108) ASTM D2622-87, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §§ 60.106(j) and 60.335(b).

(109) ASTM D2622-94, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §§ 60.106(j) and 60.335(b).

(110) ASTM D2622-98, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §§ 60.106(j) and 60.335(b).

(111) ASTM D2622-05, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry, IBR approved for § 60.4415(a).

(112) ASTM D2697-22, Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings, Approved July 1, 2022; IBR approved for §§ 60.393a(g); 60.723(b); 60.724(a); 60.725(b); 60.723a(b); 60.724a(a); 60.725a(b).

(113) ASTM D2879-83, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, approved 1983; IBR approved for §§ 60.111b(f); 60.116b(e) and (f); 60.485(e); 60.485a(e); 60.5403b(d); 60.5406c(d).

(114) ASTM D2879-96, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, approved 1996; IBR approved for §§ 60.111b(f); 60.116b(e) and (f); 60.485(e); 60.485a(e); 60.5403b(d); 60.5406c(d).

(115) ASTM D2879-97, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, approved 1997; IBR approved for §§ 60.111b(f); 60.116b(e) and (f); 60.485(e); 60.485a(e); 60.5403b(d); 60.5406c(d).

(116) ASTM D2879-23, Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, approved December 1, 2019; IBR approved for § 60.485b(e).

(117) ASTM D2880-78, Standard Specification for Gas Turbine Fuel Oils, IBR approved for §§ 60.111(b), 60.111a(b), and 60.335(d).

(118) ASTM D2880-96, Standard Specification for Gas Turbine Fuel Oils, IBR approved for §§ 60.111(b), 60.111a(b), and 60.335(d).

(119) ASTM D2908-74, Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography, IBR approved for § 60.564(j).

(120) ASTM D2908-91, Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography, IBR approved for § 60.564(j).

(121) ASTM D2986-71, Standard Method for Evaluation of Air, Assay Media by the Monodisperse DOP (Dioctyl Phthalate) Smoke Test, IBR approved for appendix A-3 to part 60: Method 5, Section 7.1.1; appendix A-5 to part 60: Method 12, Section 7.1.1; and Method 13A, Section 7.1.1.2.

(122) ASTM D2986-78, Standard Method for Evaluation of Air, Assay Media by the Monodisperse DOP (Dioctyl Phthalate) Smoke Test, IBR approved for appendix A-3 to part 60: Method 5, Section 7.1.1; appendix A-5 to part 60: Method 12, Section 7.1.1; and Method 13A, Section 7.1.1.2.

(123) ASTM D2986-95a, Standard Method for Evaluation of Air, AssaMedia by the Monodisperse DOP (Dioctyl Phthalate) Smoke Test, IBR approved for appendix A-3 to part 60: Method 5, Section 7.1.1; appendix A-5 to part 60: Method 12, Section 7.1.1; and Method 13A, Section 7.1.1.2.

(124) ASTM D3173-73, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(125) ASTM D3173-87, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(126) ASTM D3176-74, Standard Method for Ultimate Analysis of Coal and Coke, IBR approved for § 60.45(f)(5)(i) and appendix A-7 to part 60: Method 19, Section 12.3.2.3.

(127) ASTM D3176-89, Standard Method for Ultimate Analysis of Coal and Coke, IBR approved for § 60.45(f)(5)(i) and appendix A-7 to part 60: Method 19, Section 12.3.2.3.

(128) ASTM D3177-75, Standard Test Method for Total Sulfur in the Analysis Sample of Coal and Coke, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(129) ASTM D3177-89, Standard Test Method for Total Sulfur in the Analysis Sample of Coal and Coke, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(130) ASTM D3178-73 (Reapproved 1979), Standard Test Methods for Carbon and Hydrogen in the Analysis Sample of Coal and Coke, IBR approved for § 60.45(f).

(131) ASTM D3178-89, Standard Test Methods for Carbon and Hydrogen in the Analysis Sample of Coal and Coke, IBR approved for § 60.45(f).

(132) ASTM D3246-81, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, IBR approved for § 60.335(b).

(133) ASTM D3246-92, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, IBR approved for § 60.335(b).

(134) ASTM D3246-96, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, IBR approved for § 60.335(b).

(135) ASTM D3246-05, Standard Test Method for Sulfur in Petrolum Gas by Oxidative Microcoulometry, IBR approved for § 60.4415(a)(1).

(136) ASTM D3270-73T, Standard Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Semiautomated Method), IBR approved for appendix A-5 to part 60: Method 13A, Section 16.1.

(137) ASTM D3270-80, Standard Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Semiautomated Method), IBR approved for appendix A-5 to part 60: Method 13A, Section 16.1.

(138) ASTM D3270-91, Standard Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Semiautomated Method), IBR approved for appendix A-5 to part 60: Method 13A, Section 16.1.

(139) ASTM D3270-95, Standard Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Semiautomated Method), IBR approved for appendix A-5 to part 60: Method 13A, Section 16.1.

(140) ASTM D3286-85, Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(141) ASTM D3286-96, Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(142) ASTM D3370-76, Standard Practices for Sampling Water, IBR approved for § 60.564(j).

(143) ASTM D3370-95a, Standard Practices for Sampling Water, IBR approved for § 60.564(j).

(144) ASTM D3588-98 (Reapproved 2003), Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density of Gaseous Fuels, approved May 10, 2003; IBR approved for §§ 60.107a(d); 60.5413(d); 60.5413a(d); 60.5413b(d); 60.5413c(d).

(145) ASTM D3699-08, Standard Specification for Kerosine, including Appendix X1, (Approved September 1, 2008); IBR approved for §§ 60.41b; 60.41c; 60.5580; 60.5580a.

(146) ASTM D3792-79, Standard Test Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, IBR approved for appendix A-7 to part 60: Method 24, Section 6.3.

(147) ASTM D3792-91, Standard Test Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, IBR approved for appendix A-7 to part 60: Method 24, Section 6.3.

(148) ASTM D4017-81, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for appendix A-7 to part 60: Method 24, Section 6.4.

(149) ASTM D4017-90, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for appendix A-7 to part 60: Method 24, Section 6.4.

(150) ASTM D4017-96a, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for appendix A-7 to part 60: Method 24, Section 6.4.

(151) ASTM D4057-81, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(152) ASTM D4057-95, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(153) ASTM D4057-95 (Reapproved 2000), Standard Practice for Manual Sampling of Petroleum and Petroleum Products, IBR approved for § 60.4415(a).

(154) ASTM D4084-82, Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method), IBR approved for § 60.334(h).

(155) ASTM D4084-94, Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method), IBR approved for § 60.334(h).

(156) ASTM D4084-05, Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method), IBR approved for §§ 60.4360 and 60.4415(a).

(157) ASTM D4177-95, Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.2.1.

(158) ASTM D4177-95 (Reapproved 2000), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, IBR approved for § 60.4415(a).

(159) ASTM D4239-85, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(160) ASTM D4239-94, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(161) ASTM D4239-97, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(162) ASTM D4294-02, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, IBR approved for § 60.335(b).

(163) ASTM D4294-03, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, IBR approved for § 60.4415(a).

(164) ASTM D4442-84, Standard Test Methods for Direct Moisture Content Measurement in Wood and Wood-base Materials, IBR approved for appendix A-8 to part 60: Method 28, Section 16.1.1.

(165) ASTM D4442-92, Standard Test Methods for Direct Moisture Content Measurement in Wood and Wood-base Materials, IBR approved for appendix A-8 to part 60: Method 28, Section 16.1.1.

(166) ASTM D4444-92, Standard Test Methods for Use and Calibration of Hand-Held Moisture Meters, IBR approved for appendix A-8 to part 60: Method 28, Section 16.1.1.

(167) ASTM D4457-85 (Reapproved 1991), Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph, IBR approved for appendix A-7 to part 60: Method 24, Section 6.5.

(168) ASTM D4468-85 (Reapproved 2000), Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry, IBR approved for §§ 60.335(b) and 60.4415(a).

(169) ASTM D4468-85 (Reapproved 2006), Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry, (Approved June 1, 2006), IBR approved for § 60.107a(e).

(170) ASTM D4629-02, Standard Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons by Syringe/Inlet Oxidative Combustion and Chemiluminescence Detection, IBR approved for §§ 60.49b(e) and 60.335(b).

(171) ASTM D4809-95, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), IBR approved for §§ 60.18(f), 60.485(g), 60.485a(g), 60.564(f), 60.614(d), 60.664(e), and 60.704(d).

(172) ASTM D4809-06, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), (Approved December 1, 2006), IBR approved for § 60.107a(d).

(173) ASTM D4809-18, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), approved July 1, 2018; IBR approved for § 60.485b(g).

(174) ASTM D4810-88 (Reapproved 1999), Standard Test Method for Hydrogen Sulfide in Natural Gas Using Length of Stain Detector Tubes, IBR approved for §§ 60.4360 and 60.4415(a).

(175) ASTM D4840-99(2018)e1 Standard Guide for Sample Chain-of-Custody Procedures, approved August 2018; IBR approved for Appendix A-7: Method 23.

(176) ASTM D4891-89 (Reapproved 2006), Standard Test Method for Heating Value of Gases in Natural Gas Range by Stoichiometric Combustion, approved June 1, 2006; IBR approved for §§ 60.107a(d); 60.5413(d); 60.5413a(d); 60.5413b(d); 60.5413c(d).

(177) ASTM D5066-91, Standard Test Method for Determination of the Transfer Efficiency Under Production Conditions for Spray Application of Automotive Paints—Weight Basis, Approved June 1, 2017; IBR approved for § 60.393a(h).

(178) ASTM D5087-02 (Reapproved 2021), Standard Test Method for Determining Amount of Volatile Organic Compound (VOC) Released from Solventborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement), Approved February 1, 2021; IBR approved for § 60.397a(e); appendix A to subpart MMa.

(179) ASTM D5287-97 (Reapproved 2002), Standard Practice for Automatic Sampling of Gaseous Fuels, IBR approved for § 60.4415(a).

(180) ASTM D5403-93, Standard Test Methods for Volatile Content of Radiation Curable Materials, IBR approved for appendix A-7 to part 60: Method 24, Section 6.6.

(181) ASTM D5453-00, Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence, IBR approved for § 60.335(b).

(182) ASTM D5453-05, Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence, IBR approved for § 60.4415(a).

(183) ASTM D5504-01, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence, IBR approved for §§ 60.334(h) and 60.4360.

(184) ASTM D5504-08, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence, (Approved June 15, 2008), IBR approved for §§ 60.107a(e) and 60.5413(d).

(185) ASTM D5623-19, Standard Test Method for Sulfur Compounds in Light Petroleum Liquids by Gas Chromatography and Sulfur Selective Detection, (Approved July 1, 2019); IBR approved for § 60.4415(a).

(186) ASTM D5762-02, Standard Test Method for Nitrogen in Petroleum and Petroleum Products by Boat-Inlet Chemiluminescence, IBR approved for § 60.335(b).

(187) ASTM D5865-98, Standard Test Method for Gross Calorific Value of Coal and Coke, IBR approved for §§ 60.45(f) and 60.46(c), and appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(188) ASTM D5865-10, Standard Test Method for Gross Calorific Value of Coal and Coke, (Approved January 1, 2010), IBR approved for §§ 60.45(f), 60.46(c), and appendix A-7 to part 60: Method 19, section 12.5.2.1.3.

(189) ASTM D5965-02 (Reapproved 2013), Standard Test Methods for Specific Gravity of Coating Powders, Approved June 1, 2013; IBR approved for § 60.393a(f).

(190) ASTM D6093-97 (Reapproved 2016), Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer, Approved December 1, 2016; IBR approved for §§ 60.393a(g); 60.723(b); 60.724(a); 60.725(b); 60.723a(b); 60.724a(a); 60.725a(b).

(191) ASTM D6216-20, Standard Practice for Opacity Monitor Manufacturers to Certify Conformance with Design and Performance Specifications, approved September 1, 2020; IBR approved for appendix B to part 60.

(192) ASTM D6228-98, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Flame Photometric Detection, IBR approved for § 60.334(h).

(193) ASTM D6228-98 (Reapproved 2003), Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Flame Photometric Detection, IBR approved for §§ 60.4360 and 60.4415.

(194) ASTM D6266-00a (Reapproved 2017), Standard Test Method for Determining the Amount of Volatile Organic Compound (VOC) Released From Waterborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement), Approved July 1, 2017; IBR approved for § 60.397a(e).

(195) ASTM D6348-03, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, (Approved October 1, 2003), IBR approved for § 60.73a(b), table 7 to subpart IIII, table 2 to subpart JJJJ, and § 60.4245(d).

(196) ASTM D6348-12e1, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, approved February 1, 2012; IBR approved for § 60.5413c(b).

(197) ASTM D6366-99, Standard Test Method for Total Trace Nitrogen and Its Derivatives in Liquid Aromatic Hydrocarbons by Oxidative Combustion and Electrochemical Detection, IBR approved for § 60.335(b)(9).

(198) ASTM D6377-20, Standard Test Method for Determination of Vapor Pressure of Crude Oil: $VPCR_X$ (Expansion Method), (Approved June 1, 2020); IBR approved for § 60.113c.

(199) ASTM-D6378-22, Standard Test Method for Determination of Vapor Pressure (VPX) of Petroleum Products, Hydrocarbons, and Hydrocarbon-Oxygenate Mixtures (Triple Expansion Method), (Approved July 1, 2022); IBR approved for § 60.113c.

(200) ASTM D6420-99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, (Approved October 1, 2004), IBR approved for § 60.107a(d) and table 2 to subpart JJJJ.

(201) ASTM D6420-18, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, approved November 1, 2018, IBR approved for §§ 60.485(g); 60.485a(g); 60.485b(g); 60.611a; 60.614(b) and (e); 60.614a(b) and (e), 60.664(b) and (e); 60.664a(b) and (f); 60.700(c); 60.704(b) (d), and (h); 60.705(l); 60.704a(b) and (f).

(202) ASTM D6522-00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, IBR approved for § 60.335(a).

(203) ASTM D6522-00 (Reapproved 2005), Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, (Approved October 1, 2005), IBR approved for table 2 to subpart JJJJ, §§ 60.5413(b) and (d), and 60.5413a(b).

(204) ASTM D6522-11 Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers (Approved December 1, 2011), IBR approved for § 60.37f(a), 60.766(a).

(205) ASTM D6522-20, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, approved June 1, 2020; IBR approved for §§ 60.5413b(b); 60.5413c(b).

(206) ASTM D6667-01, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence, IBR approved for § 60.335(b).

(207) ASTM D6667-04, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence, IBR approved for § 60.4415(a).

(208) ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels, including Appendices X1 through X3, (Approved July 15, 2011), IBR approved for §§ 60.41b, 60.41c, 60.5580, and 60.5580a.

(209) ASTM D6784-02, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), IBR approved for § 60.56c(b) and appendix B to part 60: Performance Specification 12A, Section 8.6.2.

(210) ASTM D6784-02 (Reapproved 2008), Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), approved April 1, 2008; IBR approved for § 60.56c(b).

(211) ASTM D6784-16, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), approved March 1, 2016; IBR approved for appendix B to part 60.

(212) ASTM D6911-15 Standard Guide for Packaging and Shipping Environmental Samples for Laboratory Analysis, approved January 15, 2015; IBR approved for Appendix A-7: Method 23; Appendix A-8: Method 30B.

(213) ASTM D7039-15a, Standard Test Method for Sulfur in Gasoline, Diesel Fuel, Jet Fuel, Kerosine, Boideisel, Biodiesel Blends, and Gasoline-Ethanol Blends by Monochromatic Wavelength Dispersive X-ray Fluorescence Spectrometry, (Approved July 1, 2015); IBR approved for § 60.4415(a).

(214) ASTM D7467-10, Standard Specification for Diesel Fuel Oil, Biodiesel Blend (B6 to B20), including Appendices X1 through X3, (Approved August 1, 2010), IBR approved for §§ 60.41b, 60.41c, 60.5580, and 60.5580a.

(215) ASTM D7520-16, Standard Test Method for Determining the Opacity of a Plume in the Outdoor Ambient Atmosphere, approved April 1, 2016; IBR approved for §§ 60.123(c)(6); 60.123(c)(6)(i); 60.123(c)(6)(ii); 60.123(c)(6)(v); 60.123a(c)(6)(ii); 60.123a(c)(6)(ii)(A); 60.123a(c)(6)(ii)(B); 60.123a(c)(6)(ii)(E); 60.271(k); 60.272(a)

and (b); 60.273(c) and (d); 60.274(h); 60.275(e); 60.276(c); 60.271a; 60.272a(a) and (b); 60.273a(c) and (d); 60.274a(h); 60.275a(e); 60.276a(f); 60.271b; 60.272b(a) and (b); 60.273b(c) and (d); 60.274b(h); 60.275b(e); 60.276b(f); 60.374a(d).

(216) ASTM E168-67, General Techniques of Infrared Quantitative Analysis, IBR approved for §§ 60.485a(d), 60.593(b), 60.593a(b), and 60.632(f).

(217) ASTM E168-77, General Techniques of Infrared Quantitative Analysis, IBR approved for §§ 60.485a(d), 60.593(b), 60.593a(b), and 60.632(f).

(218) ASTM E168-92, General Techniques of Infrared Quantitative Analysis, IBR approved for §§ 60.485a(d), 60.593(b), 60.593a(b), 60.632(f), 60.5400, 60.5400a(f).

(219) ASTM E168-16 (Reapproved 2023), Standard Practices for General Techniques of Infrared Quantitative Analysis, approved January 1, 2023; IBR approved for § 60.485b(d).

(220) ASTM E169-63, General Techniques of Ultraviolet Quantitative Analysis, IBR approved for §§ 60.485a(d), 60.593(b), 60.593a(b), and 60.632(f) .

(221) ASTM E169-77, General Techniques of Ultraviolet Quantitative Analysis, IBR approved for §§ 60.485a(d), 60.593(b), and 60.593a(b), 60.632(f).

(222) ASTM E169-93, General Techniques of Ultraviolet Quantitative Analysis, (Approved May 15, 1993), IBR approved for §§ 60.485a(d), 60.593(b), 60.593a(b), 60.632(f), 60.5400(f), and 60.5400a(f).

(223) ASTM E169-16 (Reapproved 2022), Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis, approved November 1, 2022; IBR approved for § 60.485b(d).

(224) ASTM E260-73, General Gas Chromatography Procedures, IBR approved for §§ 60.485a(d), 60.593(b), 60.593a(b), and 60.632(f).

(225) ASTM E260-91, General Gas Chromatography Procedures, (IBR approved for §§ 60.485a(d), 60.593(b), 60.593a(b), and 60.632(f).

(226) ASTM E260-96, General Gas Chromatography Procedures, approved April 10, 1996; IBR approved for §§ 60.485a(d), 60.593(b), 60.593a(b), 60.632(f), 60.5400(f), 60.5400a(f), 60.5406(b), 60.5406a(b)(3), 60.5400b(a)(2), 60.5401b(a)(2), 60.5406b(b)(3), 60.5400c(a), and 60.5401c(a).

(227) ASTM E260-96 (Reapproved 2019), Standard Practice for Packed Column Gas Chromatography, approved September 1, 2029; IBR approved for § 60.485b(d).

(228) ASTM E617-13, Standard Specification for Laboratory Weights and Precision Mass Standards, approved May 1, 2013, IBR approved for appendix A-3: Methods 4, 5, 5H, 5I, and appendix A-8: Method 29.

(229) ASTM E871-82 (Reapproved 2013), Standard Test Method for Moisture Analysis of Particulate Wood Fuels, (Approved August 15, 2013), IBR approved for appendix A-8: method 28R.

(230) ASTM E1584-11, Standard Test Method for Assay of Nitric Acid, (Approved August 1, 2011), IBR approved for § 60.73a(c).

(231) ASTM E2515-11, Standard Test Method for Determination of Particulate Matter Emissions Collected by a Dilution Tunnel, (Approved November 1, 2011), IBR approved for § 60.534 and § 60.5476.

(232) ASTM E2618-13 Standard Test Method for Measurement of Particulate Matter Emissions and Heating Efficiency of Outdoor Solid Fuel-Fired Hydronic Heating Appliances, (Approved September 1, 2013), IBR approved for § 60.5476.

(233) ASTM E2779-10, Standard Test Method for Determining Particulate Matter Emissions from Pellet Heaters, (Approved October 1, 2010), IBR approved for § 60.534.

(234) ASTM E2780-10, Standard Test Method for Determining Particulate Matter Emissions from Wood Heaters, (Approved October 1, 2010), IBR approved for appendix A: method 28R.

(235) ASTM UOP539-97, Refinery Gas Analysis by Gas Chromatography, (Copyright 1997), IBR approved for § 60.107a(d).

(i) Association of Official Analytical Chemists, 1111 North 19th Street, Suite 210, Arlington, VA 22209; phone: (301) 927-7077; website: *https://www.aoac.org/*.

(1) AOAC Method 9, Official Methods of Analysis of the Association of Official Analytical Chemists (AOAC), 11th edition, 1970, pp. 11-12, IBR approved for §§ 60.204(b), 60.214(b), 60.224(b), and 60.234(b).

(2) [Reserved]

(j) CSA Group (CSA) (formerly Canadian Standards Association), 178 Rexdale Boulevard, Toronto, Ontario, Canada; phone: (800) 463-6727; website: *https://shop.csa.ca*.

(1) CSA B415.1-10, Performance Testing of Solid-fuel-burning Heating Appliances, (March 2010), IBR approved for §§ 60.534; 60.5476.

(2) [Reserved]

(k) U.S. Environmental Protection Agency (EPA), 1200 Pennsylvania Avenue NW, Washington, DC 20460; phone: (202) 272-0167; website: *www.epa.gov/aboutepa/forms/contact-epa*.

(1) EPA-453/R-08-002, Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations, September 2008, Office of Air Quality Planning and Standards (OAQPS); IBR approved for §§ 60.393a(e) and (h); 60.395a(k); 60.397a(e); appendix A to subpart MMa.

(2) EPA-454/B-08-002, Quality Assurance Handbook for Air Pollution Measurement Systems; Volume IV: Meteorological Measurements, Version 2.0 (Final), March 2008; IBR approved for appendix K to this part.

(3) EPA-454/R-98-015, Office of Air Quality Planning and Standards (OAQPS), Fabric Filter Bag Leak Detection Guidance, September 1997; IBR approved for §§ 60.124(f); 60.124a(f); 60.273(e); 60.273a(e); 60.273b(e); 60.373a(b); 60.2145(r); 60.2710(r); 60.4905(b); 60.5225(b). (Available from: *https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=2000D5T6.pdf*).

(4) EPA-600/R-12/531, EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards, May 2012; IBR approved for §§ 60.5413(d); 60.5413a(d); 60.5413b(d); 60.5413c(d).

(5) In EPA Publication No. SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (Available from: *www.epa.gov/hw-sw846/sw-846-compendium*):

(i) SW-846-6010D, Inductively Coupled Plasma-Optical Emission Spectrometry, Revision 5, July 2018; IBR approved for appendix A-5 to this part.

(ii) SW-846-6020B, Inductively Coupled Plasma-Mass Spectrometry, Revision 2, July 2014; IBR approved for appendix A-5 to this part.

(l) European Standards (EN), European Committee for Standardization, Management Centre, Avenue Marnix 17, B-1000 Brussels, Belgium; phone: + 32 2 550 08 11; website: *https://www.en-standard.eu*.

(1) DIN EN 303-5:2012E (EN 303-5), Heating boilers—Part 5: Heating boilers for solid fuels, manually and automatically stoked, nominal heat output of up to 500 kW—Terminology, requirements, testing and marking, (October 2012), IBR approved for § 60.5476.

(2) [Reserved]

(m) GPA Midstream Association, 6060 American Plaza, Suite 700, Tulsa, OK 74135; phone: (918) 493-3872; website: *www.gpamidstream.org*.

(1) GPA Midstream Standard 2140-17 (GPA 2140-17), Liquefied Petroleum Gas Specifications and Test Methods, (Revised 2017), IBR approved for § 60.4415(a).

(2) GPA Midstream Standard 2166-17 (GPA 2166-17), Obtaining Natural Gas Samples for Analysis by Gas Chromatography, (Reaffirmed 2017), IBR approved for § 60.4415(a).

(3) Gas Processors Association Standard 2172-09, Calculation of Gross Heating Value, Relative Density, Compressibility and Theoretical Hydrocarbon Liquid Content for Natural Gas Mixtures for Custody Transfer (2009), IBR approved for § 60.107a(d).

(4) GPA Standard 2174-14 (GPA 2174-14), Obtaining Liquid Hydrocarbon Samples for Analysis by Gas Chromatography, (Revised 2014), IBR approved for § 60.4415(a).

(5) GPA Standard 2261-19 (GPA 2261-19), Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography, (Revised 2019), IBR approved for § 60.4415(a).

(6) Gas Processors Association Standard 2377-86, Test for Hydrogen Sulfide and Carbon Dioxide in Natural Gas Using Length of Stain Tubes, 1986 Revision, IBR approved for §§ 60.105(b), 60.107a(b), 60.334(h), 60.4360, and 60.4415(a).

(n) International Organization for Standardization (ISO), 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland; phone: + 41 22 749 01 11; website: *www.iso.org*.

(1) ISO 8178-4: 1996(E), Reciprocating Internal Combustion Engines—Exhaust Emission Measurement—part 4: Test Cycles for Different Engine Applications, IBR approved for § 60.4241(b).

(2) ISO 2314:2009(E), Gas turbines-Acceptance tests, Third edition (December 15, 2009), IBR approved for §§ 60.5580; 60.5580a.

(3) ISO 8316: Measurement of Liquid Flow in Closed Conduits—Method by Collection of the Liquid in a Volumetric Tank (1987-10-01)—First Edition, IBR approved for § 60.107a(d).

(4) ISO 10715:1997(E), Natural gas—Sampling guidelines, (First Edition, June 1, 1997), IBR approved for § 60.4415(a).

(o) National Technical Information Services (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161.

(1) OMB Bulletin No. 93-17: Revised Statistical Definitions for Metropolitan Areas. Office of Management and Budget, June 30, 1993. NTIS No. PB 93-192-664. IBR approved for § 60.31e.

(2) [Reserved]

(p) North American Electric Reliability Corporation, 1325 G Street NW., Suite 600, Washington, DC 20005-3801, *http://www.nerc.com.*

(1) North American Electric Reliability Corporation Reliability Standard EOP-002-3, Capacity and Energy Emergencies, updated November 19, 2012, IBR approved for §§ 60.4211(f) and 60.4243(d). Also available online: *http://www.nerc.com/files/EOP-002-3__1.pdf.*

(2) [Reserved]

(q) Pacific Lumber Inspection Bureau (formerly West Coast Lumber Inspection Bureau), 1010 South 336th Street #210, Federal Way, WA 98003; phone: (253) 835.3344; website: *www.plib.org*.

(1) West Coast Lumber Standard Grading Rules No. 16, pages 5-21, 90 and 91, September 3, 1970, revised 1984, IBR approved for appendix A-8 to part 60.

(2) [Reserved]

(r) Technical Association of the Pulp and Paper Industry (TAPPI), 15 Technology Parkway South, Suite 115, Peachtree Corners, GA 30092; phone (800) 332-8686; website: *www.tappi.org.*

(1) TAPPI Method T 624 cm-11, (Copyright 2011), IBR approved, for §§ 60.285(d) and 60.285a(d).

(2) [Reserved]

(s) Underwriter's Laboratories, Inc. (UL), 333 Pfingsten Road, Northbrook, IL 60062.

(1) UL 103, Sixth Edition revised as of September 3, 1986, Standard for Chimneys, Factory-built, Residential Type and Building Heating Appliance, IBR approved for appendix A-8 to part 60.

(2) [Reserved]

(t) Water Pollution Control Federation (WPCF), 2626 Pennsylvania Avenue NW., Washington, DC 20037.

(1) Method 209A, Total Residue Dried at 103-105 °C, in Standard Methods for the Examination of Water and Wastewater, 15th Edition, 1980, IBR approved for § 60.683(b).

(2) [Reserved]

Editorial Note

Editorial Note: For Federal Register citations affecting § 60.17, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 60.18 General control device and work practice requirements.

(a) *Introduction.*

(1) This section contains requirements for control devices used to comply with applicable subparts of 40 CFR parts 60 and 61. The requirements are placed here for administrative convenience and apply only to facilities covered by subparts referring to this section.

(2) This section also contains requirements for an alternative work practice used to identify leaking equipment. This alternative work practice is placed here for administrative convenience and is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, appendix A-7, Method 21 monitor.

(b) *Flares.* Paragraphs (c) through (f) apply to flares.

(c)

(1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).

(3) An owner/operator has the choice of adhering to either the heat content specifications in paragraph (c)(3)(ii) of this section and the maximum tip velocity specifications in paragraph (c)(4) of this section, or adhering to the requirements in paragraph (c)(3)(i) of this section.

(i)

(A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, V_{max}, as determined by the following equation:

$V_{max} = (X_{H2} - K_1) * K_2$

Where:

V_{max} = Maximum permitted velocity, m/sec.

K_1 = Constant, 6.0 volume-percent hydrogen.

K_2 = Constant, 3.9(m/sec)/volume-percent hydrogen.

X_{H2} = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in § 60.17).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (f)(4) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f)(3) of this section.

(4)

(i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (c)(4) (ii) and (iii) of this section.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, V_{max}, as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.

(5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max}, as determined by the method specified in paragraph (f)(6).

(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.

(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(f)

(1) Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$$K = \text{Constant}, \quad 1.740 \times 10^{-7} \quad \left(\frac{1}{ppm}\right) \quad \left(\frac{g\ mole}{scm}\right) \quad \left(\frac{MJ}{kcal}\right)$$

where the standard temperature for $\left(\frac{g\ mole}{scm}\right)$ is 20°C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by reference as specified in § 60.17); and

H_i = Net heat of combustion of sample component i, kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in § 60.17) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(5) The maximum permitted velocity, V_{max}, for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation.

$\text{Log}_{10}(V_{max}) = (H_T + 28.8)/31.7$

V_{max} = Maximum permitted velocity, M/sec

28.8 = Constant

31.7 = Constant

H_T = The net heating value as determined in paragraph (f)(3).

(6) The maximum permitted velocity, V_{max}, for air-assisted flares shall be determined by the following equation.

$V_{max} = 8.706 + 0.7084\ (H_T)$

V_{max} = Maximum permitted velocity, m/sec

8.706 = Constant

0.7084 = Constant

H_T = The net heating value as determined in paragraph (f)(3).

(g) *Alternative work practice for monitoring equipment for leaks.* Paragraphs (g), (h), and (i) of this section apply to all equipment for which the applicable subpart requires monitoring with a 40 CFR part 60, appendix A-7, Method 21 monitor, except for closed vent systems, equipment designated as leakless, and equipment identified in the applicable subpart as having no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, appendix A-7, Method 21 monitor. Requirements in the existing subparts that are specific to the Method 21 instrument do not apply under this section. All other requirements in the applicable subpart that are not addressed in paragraphs (g), (h), and (i) of this section apply to this standard. For example, equipment specification requirements, and non-Method 21 instrument recordkeeping and reporting requirements in the applicable subpart continue to apply. The terms defined in paragraphs (g)(1) through (5) of this section have meanings that are specific to the alternative work practice standard in paragraphs (g), (h), and (i) of this section.

(1) *Applicable subpart* means the subpart in 40 CFR parts 60, 61, 63, or 65 that requires monitoring of equipment with a 40 CFR part 60, appendix A-7, Method 21 monitor.

(2) *Equipment* means pumps, valves, pressure relief valves, compressors, open-ended lines, flanges, connectors, and other equipment covered by the applicable subpart that require monitoring with a 40 CFR part 60, appendix A-7, Method 21 monitor.

(3) *Imaging* means making visible emissions that may otherwise be invisible to the naked eye.

(4) *Optical gas imaging instrument* means an instrument that makes visible emissions that may otherwise be invisible to the naked eye.

(5) *Repair* means that equipment is adjusted, or otherwise altered, in order to eliminate a leak.

(6) *Leak* means:

(i) Any emissions imaged by the optical gas instrument;

(ii) Indications of liquids dripping;

(iii) Indications by a sensor that a seal or barrier fluid system has failed; or

(iv) Screening results using a 40 CFR part 60, appendix A-7, Method 21 monitor that exceed the leak definition in the applicable subpart to which the equipment is subject.

(h) The alternative work practice standard for monitoring equipment for leaks is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, appendix A-7, Method 21 monitor.

(1) An owner or operator of an affected source subject to CFR parts 60, 61, 63, or 65 can choose to comply with the alternative work practice requirements in paragraph (i) of this section instead of using the 40 CFR part 60, appendix A-7, Method 21 monitor to identify leaking equipment. The owner or operator must document the equipment, process units, and facilities for which the alternative work practice will be used to identify leaks.

(2) Any leak detected when following the leak survey procedure in paragraph (i)(3) of this section must be identified for repair as required in the applicable subpart.

(3) If the alternative work practice is used to identify leaks, re-screening after an attempted repair of leaking equipment must be conducted using either the alternative work practice or the 40 CFR part 60, appendix A-7, Method 21 monitor at the leak definition required in the applicable subpart to which the equipment is subject.

(4) The schedule for repair is as required in the applicable subpart.

(5) When this alternative work practice is used for detecting leaking equipment, choose one of the monitoring frequencies listed in Table 1 to subpart A of this part in lieu of the monitoring frequency specified for regulated equipment in the applicable subpart. Reduced monitoring frequencies for good performance are not applicable when using the alternative work practice.

(6) When this alternative work practice is used for detecting leaking equipment the following are not applicable for the equipment being monitored:

(i) Skip period leak detection and repair;

(ii) Quality improvement plans; or

(iii) Complying with standards for allowable percentage of valves and pumps to leak.

(7) When the alternative work practice is used to detect leaking equipment, the regulated equipment in paragraph (h)(1)(i) of this section must also be monitored annually using a 40 CFR part 60, appendix A-7, Method 21 monitor at the leak definition required in the applicable subpart. The owner or operator may choose the specific monitoring period (for example, first quarter) to conduct the annual monitoring. Subsequent monitoring must be conducted every 12 months from the initial period. Owners or operators must keep records of the annual Method 21 screening results, as specified in paragraph (i)(4)(vii) of this section.

(i) An owner or operator of an affected source who chooses to use the alternative work practice must comply with the requirements of paragraphs (i)(1) through (i)(5) of this section.

(1) Instrument Specifications. The optical gas imaging instrument must comply with the requirements in (i)(1)(i) and (i)(1)(ii) of this section.

(i) Provide the operator with an image of the potential leak points for each piece of equipment at both the detection sensitivity level and within the distance used in the daily instrument check described in paragraph (i)(2) of this section. The detection sensitivity level depends upon the frequency at which leak monitoring is to be performed.

(ii) Provide a date and time stamp for video records of every monitoring event.

(2) Daily Instrument Check. On a daily basis, and prior to beginning any leak monitoring work, test the optical gas imaging instrument at the mass flow rate determined in paragraph (i)(2)(i) of this section in accordance with the procedure specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each camera configuration used during monitoring (for example, different lenses used), unless an alternative method to demonstrate daily instrument checks has been approved in accordance with paragraph (i)(2)(v) of this section.

(i) Calculate the mass flow rate to be used in the daily instrument check by following the procedures in paragraphs (i)(2)(i)(A) and (i)(2)(i)(B) of this section.

(A) For a specified population of equipment to be imaged by the instrument, determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level.

(B) Multiply the standard detection sensitivity level, corresponding to the selected monitoring frequency in Table 1 of subpart A of this part, by the mass fraction of detectable chemicals from the stream identified in paragraph (i)(2)(i)(A) of this section to determine the mass flow rate to be used in the daily instrument check, using the following equation.

$$E_{dic} = (E_{sds}) \sum_{i=1}^{k} x_i$$

Where:

E_{dic} = Mass flow rate for the daily instrument check, grams per hour

x_i = Mass fraction of detectable chemical(s) i seen by the optical gas imaging instrument, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level, E_{sds}.

E_{sds} = Standard detection sensitivity level from Table 1 to subpart A, grams per hour

k = Total number of detectable chemicals emitted from the leaking equipment and seen by the optical gas imaging instrument.

(ii) Start the optical gas imaging instrument according to the manufacturer's instructions, ensuring that all appropriate settings conform to the manufacturer's instructions.

(iii) Use any gas chosen by the user that can be viewed by the optical gas imaging instrument and that has a purity of no less than 98 percent.

(iv) Establish a mass flow rate by using the following procedures:

(A) Provide a source of gas where it will be in the field of view of the optical gas imaging instrument.

(B) Set up the optical gas imaging instrument at a recorded distance from the outlet or leak orifice of the flow meter that will not be exceeded in the actual performance of the leak survey. Do not exceed the operating parameters of the flow meter.

(C) Open the valve on the flow meter to set a flow rate that will create a mass emission rate equal to the mass rate specified in paragraph (i)(2)(i) of this section while observing the gas flow through the optical gas imaging instrument viewfinder. When an image of the gas emission is seen through the viewfinder at the required emission rate, make a record of the reading on the flow meter.

(v) Repeat the procedures specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each configuration of the optical gas imaging instrument used during the leak survey.

(vi) To use an alternative method to demonstrate daily instrument checks, apply to the Administrator for approval of the alternative under § 60.13(i).

(3) Leak Survey Procedure. Operate the optical gas imaging instrument to image every regulated piece of equipment selected for this work practice in accordance with the instrument manufacturer's operating parameters. All emissions imaged by the optical gas imaging instrument are considered to be leaks and are subject to repair. All emissions visible to the naked eye are also considered to be leaks and are subject to repair.

(4) Recordkeeping. You must keep the records described in paragraphs (i)(4)(i) through (i)(4)(vii) of this section:

(i) The equipment, processes, and facilities for which the owner or operator chooses to use the alternative work practice.

(ii) The detection sensitivity level selected from Table 1 to subpart A of this part for the optical gas imaging instrument.

(iii) The analysis to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, as specified in paragraph (i)(2)(i)(A) of this section.

(iv) The technical basis for the mass fraction of detectable chemicals used in the equation in paragraph (i)(2)(i)(B) of this section.

(v) The daily instrument check. Record the distance, per paragraph (i)(2)(iv)(B) of this section, and the flow meter reading, per paragraph (i)(2)(iv)(C) of this section, at which the leak was imaged. Keep a video record of the daily instrument check for each configuration of the optical gas imaging instrument used during the leak survey (for example, the daily instrument check must be conducted for each lens used). The video

record must include a time and date stamp for each daily instrument check. The video record must be kept for 5 years.

(vi) Recordkeeping requirements in the applicable subpart. A video record must be used to document the leak survey results. The video record must include a time and date stamp for each monitoring event. A video record can be used to meet the recordkeeping requirements of the applicable subparts if each piece of regulated equipment selected for this work practice can be identified in the video record. The video record must be kept for 5 years.

(vii) The results of the annual Method 21 screening required in paragraph (h)(7) of this section. Records must be kept for all regulated equipment specified in paragraph (h)(1) of this section. Records must identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in the existing applicable subpart.

(5) Reporting. Submit the reports required in the applicable subpart. Submit the records of the annual Method 21 screening required in paragraph (h)(7) of this section to the Administrator via e-mail to *CCG-AWP@EPA.GOV.*

§ 60.19 General notification and reporting requirements.

(a) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.

(b) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery, including the use of electronic media, agreed to by the permitting authority, is acceptable.

(c) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(d) If an owner or operator of an affected facility in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such facility under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in this part. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(e) If an owner or operator supervises one or more stationary sources affected by standards set under this part and standards set under part 61, part 63, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State with an approved permit program) a common schedule on which periodic reports required by each applicable standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the stationary source is required to be in compliance with the applicable subpart in this part, or 1 year after the stationary source is required to be in

compliance with the applicable 40 CFR part 61 or part 63 of this chapter standard, whichever is latest. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(f)

(1)

(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (f)(2) and (f)(3) of this section, the owner or operator of an affected facility remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (f)(2) and (f)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

Table 1 to Subpart A of Part 60—Detection Sensitivity Levels (grams per hour)

Monitoring frequency per subpart[a]	Detection sensitivity level
Bi-Monthly	60
Semi-Quarterly	85
Monthly	100

[a] When this alternative work practice is used to identify leaking equipment, the owner or operator must choose one of the monitoring frequencies listed in this table in lieu of the monitoring frequency specified in the applicable subpart. Bi-monthly means every other month. Semi-quarterly means twice per quarter. Monthly means once per month.

Appendix D. 40 CFR pt. 63, Subpart A – General Provisions

§ 63.1 Applicability.

(a) *General.*

(1) Terms used throughout this part are defined in § 63.2 or in the Clean Air Act (Act) as amended in 1990, except that individual subparts of this part may include specific definitions in addition to or that supersede definitions in § 63.2.

(2) This part contains national emission standards for hazardous air pollutants (NESHAP) established pursuant to section 112 of the Act as amended November 15, 1990. These standards regulate specific categories of stationary sources that emit (or have the potential to emit) one or more hazardous air pollutants listed in this part pursuant to section 112(b) of the Act. This section explains the applicability of such standards to sources affected by them. The standards in this part are independent of NESHAP contained in 40 CFR part 61. The NESHAP in part 61 promulgated by signature of the Administrator before November 15, 1990 (i.e., the date of enactment of the Clean Air Act Amendments of 1990) remain in effect until they are amended, if appropriate, and added to this part.

(3) No emission standard or other requirement established under this part shall be interpreted, construed, or applied to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established by the Administrator pursuant to other authority of the Act (section 111, part C or D or any other authority of this Act), or a standard issued under State authority. The Administrator may specify in a specific standard under this part that facilities subject to other provisions under the Act need only comply with the provisions of that standard.

(4) (i) Each relevant standard in this part 63 must identify explicitly whether each provision in this subpart A is or is not included in such relevant standard.

(ii) If a relevant part 63 standard incorporates the requirements of 40 CFR part 60, part 61 or other part 63 standards, the relevant part 63 standard must identify explicitly the applicability of each corresponding part 60, part 61, or other part 63 subpart A (General) provision.

(iii) The General Provisions in this subpart A do not apply to regulations developed pursuant to section 112(r) of the amended Act, unless otherwise specified in those regulations.

(5) [Reserved]

(6) To obtain the most current list of categories of sources to be regulated under section 112 of the Act, or to obtain the most recent regulation promulgation schedule established pursuant to section 112(e) of the Act, contact the Office of the Director, Emission Standards Division, Office of Air Quality Planning and Standards, U.S. EPA (MD-13), Research Triangle Park, North Carolina 27711.

(7)-(9) [Reserved]

(10) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word “calendar” is absent, unless otherwise specified in an applicable requirement.

(11) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, test plan, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of

verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.

(12) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in § 63.9(i).

(b) *Initial applicability determination for this part.*

(1) The provisions of this part apply to the owner or operator of any stationary source that -

(i) Emits or has the potential to emit any hazardous air pollutant listed in or pursuant to section 112(b) of the Act; and

(ii) Is subject to any standard, limitation, prohibition, or other federally enforceable requirement established pursuant to this part.

(2) [Reserved]

(3) An owner or operator of a stationary source who is in the relevant source category and who determines that the source is not subject to a relevant standard or other requirement established under this part must keep a record as specified in § 63.10(b)(3).

(c) *Applicability of this part after a relevant standard has been set under this part.*

(1) If a relevant standard has been established under this part, the owner or operator of an affected source must comply with the provisions of that standard and of this subpart as provided in paragraph (a)(4) of this section.

(2) Except as provided in § 63.10(b)(3), if a relevant standard has been established under this part, the owner or operator of an affected source may be required to obtain a title V permit from a permitting authority in the State in which the source is located. Emission standards promulgated in this part for area sources pursuant to section 112(c)(3) of the Act will specify whether -

(i) States will have the option to exclude area sources affected by that standard from the requirement to obtain a title V permit (i.e., the standard will exempt the category of area sources altogether from the permitting requirement);

(ii) States will have the option to defer permitting of area sources in that category until the Administrator takes rulemaking action to determine applicability of the permitting requirements; or

(iii) If a standard fails to specify what the permitting requirements will be for area sources affected by such a standard, then area sources that are subject to the standard will be subject to the requirement to obtain a title V permit without any deferral.

(3)-(4) [Reserved]

(5) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source that is subject to the emission standard or other requirement, such source also shall be subject to the notification requirements of this subpart.

(6) A major source may become an area source at any time upon reducing its emissions of and potential to emit hazardous air pollutants, as defined in this subpart, to below the major source thresholds established in § 63.2, subject to the provisions in paragraphs (c)(6)(i) and (ii) of this section.

(i) A major source reclassifying to area source status is subject to the applicability of standards, compliance dates and notification requirements specified in (c)(6)(i)(A) of this section. An area source that previously

was a major source and becomes a major source again is subject to the applicability of standards, compliance dates, and notification requirements specified in (c)(6)(i)(B) of this section:

(A) A major source reclassifying to area source status under this part remains subject to any applicable major source requirements established under this part until the reclassification becomes effective. After the reclassification becomes effective, the source is subject to any applicable area source requirements established under this part immediately, provided the compliance date for the area source requirements has passed. The owner or operator of a major source that becomes an area source subject to newly applicable area source requirements under this part must comply with the initial notification requirements pursuant to § 63.9(b). The owner or operator of a major source that becomes an area source must also provide to the Administrator any change in the information already provided under § 63.9(b) per § 63.9(j).

(B) An area source that previously was a major source under this part and that becomes a major source again is subject to the applicable major source requirements established under this part immediately upon becoming a major source again, provided the compliance date for the major source requirements has passed, notwithstanding any provision within the applicable subparts. The owner or operator of an area source that becomes a major source again must comply with the initial notification pursuant to § 63.9(b). The owner or operator must also provide to the Administrator any change in the information already provided under § 63.9(b) per § 63.9(j).

(ii) Becoming an area source does not absolve a source subject to an enforcement action or investigation for major source violations or infractions from the consequences of any actions occurring when the source was major. Becoming a major source does not absolve a source subject to an enforcement action or investigation for area source violations or infractions from the consequences of any actions occurring when the source was an area source.

(iii) After September 10, 2024, affected sources subject to the following 40 CFR part 63 subparts on September 10, 2024, must remain subject to those subparts, and any modifications thereafter, even if the source becomes an area source by reducing both its actual emissions and potential to emit hazardous air pollutants to below major source thresholds: F, G, H, I, L, R, X, CC, GG, II, JJ, KK, LL, MM, EEE, JJJ, LLL, MMM, RRR, UUU, FFFF, JJJJ, MMMM, PPPP, ZZZZ, CCCCC, DDDDD, FFFFF, IIIII, LLLLL, YYYYY, JJJJJJ, EEEEEEE.

(d) [Reserved]

(e) If the Administrator promulgates an emission standard under section 112(d) or (h) of the Act that is applicable to a source subject to an emission limitation by permit established under section 112(j) of the Act, and the requirements under the section 112(j) emission limitation are substantially as effective as the promulgated emission standard, the owner or operator may request the permitting authority to revise the source's title V permit to reflect that the emission limitation in the permit satisfies the requirements of the promulgated emission standard. The process by which the permitting authority determines whether the section 112(j) emission limitation is substantially as effective as the promulgated emission standard must include, consistent with part 70 or 71 of this chapter, the opportunity for full public, EPA, and affected State review (including the opportunity for EPA's objection) prior to the permit revision being finalized. A negative determination by the permitting authority constitutes final action for purposes of review and appeal under the applicable title V operating permit program.

§ 63.2 Definitions.

The terms used in this part are defined in the Act or in this section as follows:

Act means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Pub. L. 101-549, 104 Stat. 2399).

Actual emissions is defined in subpart D of this part for the purpose of granting a compliance extension for an early reduction of hazardous air pollutants.

Administrator means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g., a State that has been delegated the authority to implement the provisions of this part).

Affected source, for the purposes of this part, means the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a section 112(c) source category or subcategory for which a section 112(d) standard or other relevant standard is established pursuant to section 112 of the Act. Each relevant standard will define the "affected source," as defined in this paragraph unless a different definition is warranted based on a published justification as to why this definition would result in significant administrative, practical, or implementation problems and why the different definition would resolve those problems. The term "affected source," as used in this part, is separate and distinct from any other use of that term in EPA regulations such as those implementing title IV of the Act. Affected source may be defined differently for part 63 than affected facility and stationary source in parts 60 and 61, respectively. This definition of "affected source," and the procedures for adopting an alternative definition of "affected source," shall apply to each section 112(d) standard for which the initial proposed rule is signed by the Administrator after June 30, 2002.

Alternative emission limitation means conditions established pursuant to sections 112(i)(5) or 112(i)(6) of the Act by the Administrator or by a State with an approved permit program.

Alternative emission standard means an alternative means of emission limitation that, after notice and opportunity for public comment, has been demonstrated by an owner or operator to the Administrator's satisfaction to achieve a reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such pollutant achieved under a relevant design, equipment, work practice, or operational emission standard, or combination thereof, established under this part pursuant to section 112(h) of the Act.

Alternative test method means any method of sampling and analyzing for an air pollutant that has been demonstrated to the Administrator's satisfaction, using Method 301 in appendix A of this part, to produce results adequate for the Administrator's determination that it may be used in place of a test method specified in this part.

Approved permit program means a State permit program approved by the Administrator as meeting the requirements of part 70 of this chapter or a Federal permit program established in this chapter pursuant to title V of the Act (42 U.S.C. 7661).

Area source means any stationary source of hazardous air pollutants that is not a major source as defined in this part.

Commenced means, with respect to construction or reconstruction of an affected source, that an owner or operator has undertaken a continuous program of construction or reconstruction or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or reconstruction.

Compliance date means the date by which an affected source is required to be in compliance with a relevant standard, limitation, prohibition, or any federally enforceable requirement established by the Administrator (or a State with an approved permit program) pursuant to section 112 of the Act.

Compliance schedule means:

(1) In the case of an affected source that is in compliance with all applicable requirements established under this part, a statement that the source will continue to comply with such requirements; or

(2) In the case of an affected source that is required to comply with applicable requirements by a future date, a statement that the source will meet such requirements on a timely basis and, if required by an applicable requirement, a detailed schedule of the dates by which each step toward compliance will be reached; or

(3) In the case of an affected source not in compliance with all applicable requirements established under this part, a schedule of remedial measures, including an enforceable sequence of actions or operations with milestones and a schedule for the submission of certified progress reports, where applicable, leading to compliance with a relevant standard, limitation, prohibition, or any federally enforceable requirement established pursuant to section 112 of the Act for which the affected source is not in compliance. This compliance schedule shall resemble and be at least as stringent as that contained in any

judicial consent decree or administrative order to which the source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.

Construction means the on-site fabrication, erection, or installation of an affected source. Construction does not include the removal of all equipment comprising an affected source from an existing location and reinstallation of such equipment at a new location. The owner or operator of an existing affected source that is relocated may elect not to reinstall minor ancillary equipment including, but not limited to, piping, ductwork, and valves. However, removal and reinstallation of an affected source will be construed as reconstruction if it satisfies the criteria for reconstruction as defined in this section. The costs of replacing minor ancillary equipment must be considered in determining whether the existing affected source is reconstructed.

Continuous emission monitoring system (CEMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of emissions.

Continuous monitoring system (CMS) is a comprehensive term that may include, but is not limited to, continuous emission monitoring systems, continuous opacity monitoring systems, continuous parameter monitoring systems, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation.

Continuous opacity monitoring system (COMS) means a continuous monitoring system that measures the opacity of emissions.

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

Effective date means:

(1) With regard to an emission standard established under this part, the date of promulgation in the Federal Register of such standard; or

(2) With regard to an alternative emission limitation or equivalent emission limitation determined by the Administrator (or a State with an approved permit program), the date that the alternative emission limitation or equivalent emission limitation becomes effective according to the provisions of this part.

Emission standard means a national standard, limitation, prohibition, or other regulation promulgated in a subpart of this part pursuant to sections 112(d), 112(h), or 112(f) of the Act.

Emissions averaging is a way to comply with the emission limitations specified in a relevant standard, whereby an affected source, if allowed under a subpart of this part, may create emission credits by reducing emissions from specific points to a level below that required by the relevant standard, and those credits are used to offset emissions from points that are not controlled to the level required by the relevant standard.

EPA means the United States Environmental Protection Agency.

Equivalent emission limitation means any maximum achievable control technology emission limitation or requirements which are applicable to a major source of hazardous air pollutants and are adopted by the Administrator (or a State with an approved permit program) on a case-by-case basis, pursuant to section 112(g) or (j) of the Act.

Excess emissions and continuous monitoring system performance report is a report that must be submitted periodically by an affected source in order to provide data on its compliance with relevant emission limits, operating parameters, and the performance of its continuous parameter monitoring systems.

Existing source means any affected source that is not a new source.

Federally enforceable means all limitations and conditions that are enforceable by the Administrator and citizens under the Act or that are enforceable under other statutes administered by the Administrator. Examples of federally enforceable limitations and conditions include, but are not limited to:

(1) Emission standards, alternative emission standards, alternative emission limitations, and equivalent emission limitations established pursuant to section 112 of the Act as amended in 1990;

(2) New source performance standards established pursuant to section 111 of the Act, and emission standards established pursuant to section 112 of the Act before it was amended in 1990;

(3) All terms and conditions in a title V permit, including any provisions that limit a source's potential to emit, unless expressly designated as not federally enforceable;

(4) Limitations and conditions that are part of an approved State Implementation Plan (SIP) or a Federal Implementation Plan (FIP);

(5) Limitations and conditions that are part of a Federal construction permit issued under 40 CFR 52.21 or any construction permit issued under regulations approved by the EPA in accordance with 40 CFR part 51;

(6) Limitations and conditions that are part of an operating permit where the permit and the permitting program pursuant to which it was issued meet all of the following criteria:

(i) The operating permit program has been submitted to and approved by EPA into a State implementation plan (SIP) under section 110 of the CAA;

(ii) The SIP imposes a legal obligation that operating permit holders adhere to the terms and limitations of such permits and provides that permits which do not conform to the operating permit program requirements and the requirements of EPA's underlying regulations may be deemed not “federally enforceable” by EPA;

(iii) The operating permit program requires that all emission limitations, controls, and other requirements imposed by such permits will be at least as stringent as any other applicable limitations and requirements contained in the SIP or enforceable under the SIP, and that the program may not issue permits that waive, or make less stringent, any limitations or requirements contained in or issued pursuant to the SIP, or that are otherwise “federally enforceable”;

(iv) The limitations, controls, and requirements in the permit in question are permanent, quantifiable, and otherwise enforceable as a practical matter; and

(v) The permit in question was issued only after adequate and timely notice and opportunity for comment for EPA and the public.

(7) Limitations and conditions in a State rule or program that has been approved by the EPA under subpart E of this part for the purposes of implementing and enforcing section 112; and

(8) Individual consent agreements that the EPA has legal authority to create.

Fixed capital cost means the capital needed to provide all the depreciable components of an existing source.

Force majeure means, for purposes of § 63.7, an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents the owner or operator from complying with the regulatory requirement to conduct performance tests within the specified timeframe despite the affected facility's best efforts to fulfill the obligation. Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility.

Fugitive emissions means those emissions from a stationary source that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. Under section 112 of the Act, all fugitive emissions are to be considered in determining whether a stationary source is a major source.

Hazardous air pollutant means any air pollutant listed in or pursuant to section 112(b) of the Act.

Issuance of a part 70 permit will occur, if the State is the permitting authority, in accordance with the requirements of part 70 of this chapter and the applicable, approved State permit program. When the EPA is the permitting authority, issuance of a title V permit occurs immediately after the EPA takes final action on the final permit.

Major source means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Monitoring means the collection and use of measurement data or other information to control the operation of a process or pollution control device or to verify a work practice standard relative to assuring compliance with applicable requirements. Monitoring is composed of four elements:

(1) Indicator(s) of performance - the parameter or parameters you measure or observe for demonstrating proper operation of the pollution control measures or compliance with the applicable emissions limitation or standard. Indicators of performance may include direct or predicted emissions measurements (including opacity), operational parametric values that correspond to process or control device (and capture system) efficiencies or emissions rates, and recorded findings of inspection of work practice activities, materials tracking, or design characteristics. Indicators may be expressed as a single maximum or minimum value, a function of process variables (for example, within a range of pressure drops), a particular operational or work practice status (for example, a damper position, completion of a waste recovery task, materials tracking), or an interdependency between two or among more than two variables.

(2) Measurement techniques - the means by which you gather and record information of or about the indicators of performance. The components of the measurement technique include the detector type, location and installation specifications, inspection procedures, and quality assurance and quality control measures. Examples of measurement techniques include continuous emission monitoring systems, continuous opacity monitoring systems, continuous parametric monitoring systems, and manual inspections that include making records of process conditions or work practices.

(3) Monitoring frequency - the number of times you obtain and record monitoring data over a specified time interval. Examples of monitoring frequencies include at least four points equally spaced for each hour for continuous emissions or parametric monitoring systems, at least every 10 seconds for continuous opacity monitoring systems, and at least once per operating day (or week, month, etc.) for work practice or design inspections.

(4) Averaging time - the period over which you average and use data to verify proper operation of the pollution control approach or compliance with the emissions limitation or standard. Examples of averaging time include a 3-hour average in units of the emissions limitation, a 30-day rolling average emissions value, a daily average of a control device operational parametric range, and an instantaneous alarm.

New affected source means the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a section 112(c) source category or subcategory that is subject to a section 112(d) or other relevant standard for new sources. This definition of “new affected source,” and the criteria to be utilized in implementing it, shall apply to each section 112(d) standard for which the initial proposed rule is signed by the Administrator after June 30, 2002. Each relevant standard will define the term “new affected source,” which will be the same as the “affected source” unless a different collection is warranted based on consideration of factors including:

(1) Emission reduction impacts of controlling individual sources versus groups of sources;

(2) Cost effectiveness of controlling individual equipment;

(3) Flexibility to accommodate common control strategies;

(4) Cost/benefits of emissions averaging;

(5) Incentives for pollution prevention;

(6) Feasibility and cost of controlling processes that share common equipment (e.g., product recovery devices);

(7) Feasibility and cost of monitoring; and

(8) Other relevant factors.

New source means any affected source the construction or reconstruction of which is commenced after the Administrator first proposes a relevant emission standard under this part establishing an emission standard applicable to such source.

One-hour period, unless otherwise defined in an applicable subpart, means any 60-minute period commencing on the hour.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background. For continuous opacity monitoring systems, opacity means the fraction of incident light that is attenuated by an optical medium.

Owner or operator means any person who owns, leases, operates, controls, or supervises a stationary source.

Performance audit means a procedure to analyze blind samples, the content of which is known by the Administrator, simultaneously with the analysis of performance test samples in order to provide a measure of test data quality.

Performance evaluation means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

Permit modification means a change to a title V permit as defined in regulations codified in this chapter to implement title V of the Act (42 U.S.C. 7661).

Permit program means a comprehensive State operating permit system established pursuant to title V of the Act (42 U.S.C. 7661) and regulations codified in part 70 of this chapter and applicable State regulations, or a comprehensive Federal operating permit system established pursuant to title V of the Act and regulations codified in this chapter.

Permit revision means any permit modification or administrative permit amendment to a title V permit as defined in regulations codified in this chapter to implement title V of the Act (42 U.S.C. 7661).

Permitting authority means:

(1) The State air pollution control agency, local agency, other State agency, or other agency authorized by the Administrator to carry out a permit program under part 70 of this chapter; or

(2) The Administrator, in the case of EPA-implemented permit programs under title V of the Act (42 U.S.C. 7661).

Pollution Prevention means *source reduction* as defined under the Pollution Prevention Act (42 U.S.C. 13101-13109). The definition is as follows:

(1) *Source reduction* is any practice that:

(i) Reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and

(ii) Reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

(2) The term *source reduction* includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.

(3) The term *source reduction* does not include any practice that alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity which itself is not integral to and necessary for the production of a product or the providing of a service.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is enforceable.

Reconstruction, unless otherwise defined in a relevant standard, means the replacement of components of an affected or a previously nonaffected source to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and

(2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act. Upon reconstruction, an affected source, or a stationary source that becomes an affected source, is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

Regulation promulgation schedule means the schedule for the promulgation of emission standards under this part, established by the Administrator pursuant to section 112(e) of the Act and published in the Federal Register.

Relevant standard means:

(1) An emission standard;

(2) An alternative emission standard;

(3) An alternative emission limitation; or

(4) An equivalent emission limitation established pursuant to section 112 of the Act that applies to the collection of equipment, activities, or both regulated by such standard or limitation. A relevant standard may include or consist of a design, equipment, work practice, or operational requirement, or other measure, process, method, system, or technique (including prohibition of emissions) that the Administrator (or a State) establishes for new or existing sources to which such standard or limitation applies. Every relevant standard established pursuant to section 112 of the Act includes subpart A of this part, as provided by § 63.1(a)(4), and all applicable appendices of this part or of other parts of this chapter that are referenced in that standard.

Responsible official means one of the following:

(1) For a corporation: A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representative is approved in advance by the Administrator.

(2) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

(3) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of the EPA).

(4) For affected sources (as defined in this part) applying for or subject to a title V permit: "responsible official" shall have the same meaning as defined in part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever is applicable.

Run means one of a series of emission or other measurements needed to determine emissions for a representative operating period or cycle as specified in this part.

Shutdown means the cessation of operation of an affected source or portion of an affected source for any purpose.

Six-minute period means, with respect to opacity determinations, any one of the 10 equal parts of a 1-hour period.

Source at a Performance Track member facility means a major or area source located at a facility which has been accepted by EPA for membership in the Performance Track Program (as described at *www.epa.gov/PerformanceTrack*) and is still a member of the Program. The Performance Track Program is a voluntary program that encourages continuous environmental improvement through the use of environmental management systems, local community outreach, and measurable results.

Standard conditions means a temperature of 293 K (68 °F) and a pressure of 101.3 kilopascals (29.92 in. Hg).

Startup means the setting in operation of an affected source or portion of an affected source for any purpose.

State means all non-Federal authorities, including local agencies, interstate associations, and State-wide programs, that have delegated authority to implement:

(1) The provisions of this part and/or

(2) the permit program established under part 70 of this chapter. The term State shall have its conventional meaning where clear from the context.

Stationary source means any building, structure, facility, or installation which emits or may emit any air pollutant.

Test method means the validated procedure for sampling, preparing, and analyzing for an air pollutant specified in a relevant standard as the performance test procedure. The test method may include methods described in an appendix of this chapter, test methods incorporated by reference in this part, or methods validated for an application through procedures in Method 301 of appendix A of this part.

Title V permit means any permit issued, renewed, or revised pursuant to Federal or State regulations established to implement title V of the Act (42 U.S.C. 7661). A title V permit issued by a State permitting authority is called a part 70 permit in this part.

Visible emission means the observation of an emission of opacity or optical density above the threshold of vision.

Working day means any day on which Federal Government offices (or State government offices for a State that has obtained delegation under section 112(l)) are open for normal business. Saturdays, Sundays, and official Federal (or where delegated, State) holidays are not working days.

§ 63.3 Units and abbreviations.

Used in this part are abbreviations and symbols of units of measure. These are defined as follows:

(a) *System International (SI) units of measure:*

A = ampere

g = gram

Hz = hertz

J = joule

°K = degree Kelvin

kg = kilogram

l = liter

m = meter

m^3 = cubic meter

mg = milligram = 10^{-3} gram

ml = milliliter = 10^{-3} liter

mm = millimeter = 10^{-3} meter

Mg = megagram = 10^6 gram = metric ton

MJ = megajoule

mol = mole

N = newton

ng = nanogram = 10^{-9} gram

nm = nanometer = 10^{-9} meter

Pa = pascal

s = second

V = volt

W = watt

Ω = ohm

µg = microgram = 10^{-6} gram

µl = microliter = 10^{-6} liter

(b) *Other units of measure:*

Btu = British thermal unit

°C = degree Celsius (centigrade)

cal = calorie

cfm = cubic feet per minute

cc = cubic centimeter

cu ft = cubic feet

d = day

dcf = dry cubic feet

dcm = dry cubic meter

dscf = dry cubic feet at standard conditions

dscm = dry cubic meter at standard conditions

eq = equivalent

°F degree Fahrenheit

ft = feet

ft^2 = square feet

ft^3 = cubic feet

gal = gallon

gr = grain

g-eq = gram equivalent

g-mole = gram mole

hr = hour

in. = inch

in. H_2O = inches of water

K = 1,000

kcal = kilocalorie

lb = pound

lpm = liter per minute

meq = milliequivalent

min = minute

MW = molecular weight

oz = ounces

ppb = parts per billion

ppbw = parts per billion by weight

ppbv = parts per billion by volume

ppm = parts per million

ppmw = parts per million by weight

ppmv = parts per million by volume

psia = pounds per square inch absolute

psig = pounds per square inch gage

°R = degree Rankine

scf = cubic feet at standard conditions

scfh = cubic feet at standard conditions per hour

scm = cubic meter at standard conditions

scmm = cubic meter at standard conditions per minute

sec = second

sq ft = square feet

std = at standard conditions

v/v = volume per volume

yd^2 = square yards

yr = year

(c) *Miscellaneous:*

act = actual

avg = average

I.D. = inside diameter

M = molar

N = normal

O.D. = outside diameter

% = percent

§ 63.4 Prohibited activities and circumvention.

(a) *Prohibited activities.*

(1) No owner or operator subject to the provisions of this part must operate any affected source in violation of the requirements of this part. Affected sources subject to and in compliance with either an extension of compliance or an exemption from compliance are not in violation of the requirements of this part. An extension of compliance can be granted by the Administrator under this part; by a State with an approved permit program; or by the President under section 112(i)(4) of the Act.

(2) No owner or operator subject to the provisions of this part shall fail to keep records, notify, report, or revise reports as required under this part.

(3)-(5) [Reserved]

(b) *Circumvention.* No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to -

(1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere;

(2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions; and

(c) *Fragmentation.* Fragmentation after November 15, 1990 which divides ownership of an operation, within the same facility among various owners where there is no real change in control, will not affect applicability. The owner and operator must not use fragmentation or phasing of reconstruction activities (i.e., intentionally dividing reconstruction into multiple parts for purposes of avoiding new source requirements) to avoid becoming subject to new source requirements.

§ 63.5 Preconstruction review and notification requirements.

(a) *Applicability.*

(1) This section implements the preconstruction review requirements of section 112(i)(1). After the effective date of a relevant standard, promulgated pursuant to section 112(d), (f), or (h) of the Act, under this part, the preconstruction review requirements in this section apply to the owner or operator of new affected sources and reconstructed affected sources that are major-emitting as specified in this section. New and reconstructed affected

sources that commence construction or reconstruction before the effective date of a relevant standard are not subject to the preconstruction review requirements specified in paragraphs (b)(3), (d), and (e) of this section.

(2) This section includes notification requirements for new affected sources and reconstructed affected sources that are not major-emitting affected sources and that are or become subject to a relevant promulgated emission standard after the effective date of a relevant standard promulgated under this part.

(b) *Requirements for existing, newly constructed, and reconstructed sources.*

(1) A new affected source for which construction commences after proposal of a relevant standard is subject to relevant standards for new affected sources, including compliance dates. An affected source for which reconstruction commences after proposal of a relevant standard is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

(2) [Reserved]

(3) After the effective date of any relevant standard promulgated by the Administrator under this part, no person may, without obtaining written approval in advance from the Administrator in accordance with the procedures specified in paragraphs (d) and (e) of this section, do any of the following:

(i) Construct a new affected source that is major-emitting and subject to such standard;

(ii) Reconstruct an affected source that is major-emitting and subject to such standard; or

(iii) Reconstruct a major source such that the source becomes an affected source that is major-emitting and subject to the standard.

(4) After the effective date of any relevant standard promulgated by the Administrator under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in § 63.9(b).

(5) [Reserved]

(6) After the effective date of any relevant standard promulgated by the Administrator under this part, equipment added (or a process change) to an affected source that is within the scope of the definition of affected source under the relevant standard must be considered part of the affected source and subject to all provisions of the relevant standard established for that affected source.

(c) [Reserved]

(d) *Application for approval of construction or reconstruction.* The provisions of this paragraph implement section 112(i)(1) of the Act.

(1) *General application requirements.*

(i) An owner or operator who is subject to the requirements of paragraph (b)(3) of this section must submit to the Administrator an application for approval of the construction or reconstruction. The application must be submitted as soon as practicable before actual construction or reconstruction begins. The application for approval of construction or reconstruction may be used to fulfill the initial notification requirements of § 63.9(b)(5). The owner or operator may submit the application for approval well in advance of the date actual construction or reconstruction begins in order to ensure a timely review by the Administrator and that the planned date to begin will not be delayed.

(ii) A separate application shall be submitted for each construction or reconstruction. Each application for approval of construction or reconstruction shall include at a minimum:

(A) The applicant's name and address;

(B) A notification of intention to construct a new major affected source or make any physical or operational change to a major affected source that may meet or has been determined to meet the criteria for a reconstruction, as defined in § 63.2 or in the relevant standard;

(C) The address (i.e., physical location) or proposed address of the source;

(D) An identification of the relevant standard that is the basis of the application;

(E) The expected date of the beginning of actual construction or reconstruction;

(F) The expected completion date of the construction or reconstruction;

(G) [Reserved]

(H) The type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times and in accordance with the test methods specified in the relevant standard, or if actual emissions data are not yet available, an estimate of the type and quantity of hazardous air pollutants expected to be emitted by the source reported in units and averaging times specified in the relevant standard. The owner or operator may submit percent reduction information if a relevant standard is established in terms of percent reduction. However, operating parameters, such as flow rate, shall be included in the submission to the extent that they demonstrate performance and compliance; and

(I) [Reserved]

(J) Other information as specified in paragraphs (d)(2) and (d)(3) of this section.

(iii) An owner or operator who submits estimates or preliminary information in place of the actual emissions data and analysis required in paragraphs (d)(1)(ii)(H) and (d)(2) of this section shall submit the actual, measured emissions data and other correct information as soon as available but no later than with the notification of compliance status required in § 63.9(h) (see § 63.9(h)(5)).

(2) *Application for approval of construction.* Each application for approval of construction must include, in addition to the information required in paragraph (d)(1)(ii) of this section, technical information describing the proposed nature, size, design, operating design capacity, and method of operation of the source, including an identification of each type of emission point for each type of hazardous air pollutant that is emitted (or could reasonably be anticipated to be emitted) and a description of the planned air pollution control system (equipment or method) for each emission point. The description of the equipment to be used for the control of emissions must include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions must include an estimated control efficiency (percent) for that method. Such technical information must include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations.

(3) *Application for approval of reconstruction.* Each application for approval of reconstruction shall include, in addition to the information required in paragraph (d)(1)(ii) of this section -

(i) A brief description of the affected source and the components that are to be replaced;

(ii) A description of present and proposed emission control systems (i.e., equipment or methods). The description of the equipment to be used for the control of emissions shall include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions shall include an estimated control efficiency (percent) for that method. Such technical information shall include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations;

(iii) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new source;

(iv) The estimated life of the affected source after the replacements; and

(v) A discussion of any economic or technical limitations the source may have in complying with relevant standards or other requirements after the proposed replacements. The discussion shall be sufficiently detailed to demonstrate to the Administrator's satisfaction that the technical or economic limitations affect the source's ability to comply with the relevant standard and how they do so.

(vi) If in the application for approval of reconstruction the owner or operator designates the affected source as a reconstructed source and declares that there are no economic or technical limitations to prevent the source from complying with all relevant standards or other requirements, the owner or operator need not submit the information required in paragraphs (d)(3)(iii) through (d)(3)(v) of this section.

(4) *Additional information.* The Administrator may request additional relevant information after the submittal of an application for approval of construction or reconstruction.

(e) *Approval of construction or reconstruction.*

(1) (i) If the Administrator determines that, if properly constructed, or reconstructed, and operated, a new or existing source for which an application under paragraph (d) of this section was submitted will not cause emissions in violation of the relevant standard(s) and any other federally enforceable requirements, the Administrator will approve the construction or reconstruction.

(ii) In addition, in the case of reconstruction, the Administrator's determination under this paragraph will be based on:

(A) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new source;

(B) The estimated life of the source after the replacements compared to the life of a comparable entirely new source;

(C) The extent to which the components being replaced cause or contribute to the emissions from the source; and

(D) Any economic or technical limitations on compliance with relevant standards that are inherent in the proposed replacements.

(2) (i) The Administrator will notify the owner or operator in writing of approval or intention to deny approval of construction or reconstruction within 60 calendar days after receipt of sufficient information to evaluate an application submitted under paragraph (d) of this section. The 60-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. The Administrator will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(3) Before denying any application for approval of construction or reconstruction, the Administrator will notify the applicant of the Administrator's intention to issue the denial together with -

(i) Notice of the information and findings on which the intended denial is based; and

(ii) Notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator to enable further action on the application.

(4) A final determination to deny any application for approval will be in writing and will specify the grounds on which the denial is based. The final determination will be made within 60 calendar days of presentation of additional information or arguments (if the application is complete), or within 60 calendar days after the final date specified for presentation if no presentation is made.

(5) Neither the submission of an application for approval nor the Administrator's approval of construction or reconstruction shall -

(i) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(ii) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(f) *Approval of construction or reconstruction based on prior State preconstruction review.*

(1) Preconstruction review procedures that a State utilizes for other purposes may also be utilized for purposes of this section if the procedures are substantially equivalent to those specified in this section. The Administrator will approve an application for construction or reconstruction specified in paragraphs (b)(3) and (d) of this section if the owner or operator of a new affected source or reconstructed affected source, who is subject to such requirement meets the following conditions:

(i) The owner or operator of the new affected source or reconstructed affected source has undergone a preconstruction review and approval process in the State in which the source is (or would be) located and has received a federally enforceable construction permit that contains a finding that the source will meet the relevant promulgated emission standard, if the source is properly built and operated.

(ii) Provide a statement from the State or other evidence (such as State regulations) that it considered the factors specified in paragraph (e)(1) of this section.

(2) The owner or operator must submit to the Administrator the request for approval of construction or reconstruction under this paragraph (f)(2) no later than the application deadline specified in paragraph (d)(1) of this section (see also § 63.9(b)(2)). The owner or operator must include in the request information sufficient for the Administrator's determination. The Administrator will evaluate the owner or operator's request in accordance with the procedures specified in paragraph (e) of this section. The Administrator may request additional relevant information after the submittal of a request for approval of construction or reconstruction under this paragraph (f)(2).

§ 63.6 Compliance with standards and maintenance requirements.

(a) *Applicability.*

(1) The requirements in this section apply to the owner or operator of affected sources for which any relevant standard has been established pursuant to section 112 of the Act and the applicability of such requirements is set out in accordance with § 63.1(a)(4) unless -

(i) The Administrator (or a State with an approved permit program) has granted an extension of compliance consistent with paragraph (i) of this section; or

(ii) The President has granted an exemption from compliance with any relevant standard in accordance with section 112(i)(4) of the Act.

(2) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source, such source shall be subject to the relevant emission standard or other requirement.

(b) *Compliance dates for new and reconstructed sources.*

(1) Except as specified in paragraphs (b)(3) and (4) of this section, the owner or operator of a new or reconstructed affected source for which construction or reconstruction commences after proposal of a relevant standard that has an initial startup before the effective date of a relevant standard established under this part pursuant to section 112(d), (f), or (h) of the Act must comply with such standard not later than the standard's effective date.

(2) Except as specified in paragraphs (b)(3) and (4) of this section, the owner or operator of a new or reconstructed affected source that has an initial startup after the effective date of a relevant standard established under this part pursuant to section 112(d), (f), or (h) of the Act must comply with such standard upon startup of the source.

(3) The owner or operator of an affected source for which construction or reconstruction is commenced after the proposal date of a relevant standard established under this part pursuant to section 112(d), 112(f), or 112(h) of the Act but before the effective date (that is, promulgation) of such standard shall comply with the relevant emission standard not later than the date 3 years after the effective date if:

(i) The promulgated standard (that is, the relevant standard) is more stringent than the proposed standard; for purposes of this paragraph, a finding that controls or compliance methods are “more stringent” must include control technologies or performance criteria and compliance or compliance assurance methods that are different but are substantially equivalent to those required by the promulgated rule, as determined by the Administrator (or his or her authorized representative); and

(ii) The owner or operator complies with the standard as proposed during the 3-year period immediately after the effective date.

(4) The owner or operator of an affected source for which construction or reconstruction is commenced after the proposal date of a relevant standard established pursuant to section 112(d) of the Act but before the proposal date of a relevant standard established pursuant to section 112(f) shall not be required to comply with the section 112(f) emission standard until the date 10 years after the date construction or reconstruction is commenced, except that, if the section 112(f) standard is promulgated more than 10 years after construction or reconstruction is commenced, the owner or operator must comply with the standard as provided in paragraphs (b)(1) and (2) of this section.

(5) The owner or operator of a new source that is subject to the compliance requirements of paragraph (b)(3) or (4) of this section must notify the Administrator in accordance with § 63.9(d)

(6) [Reserved]

(7) When an area source increases its emissions of (or its potential to emit) hazardous air pollutants such that the source becomes a major source, the portion of the facility that meets the definition of a new affected source must comply with all requirements of that standard applicable to new sources. The source owner or operator must comply with the relevant standard upon startup.

(c) *Compliance dates for existing sources.*

(1) After the effective date of a relevant standard established under this part pursuant to section 112(d) or 112(h) of the Act, the owner or operator of an existing source shall comply with such standard by the compliance date established by the Administrator in the applicable subpart(s) of this part, except as provided in § 63.1(c)(6)(i). Except as otherwise provided for in section 112 of the Act, in no case will the compliance date established for an existing source in an applicable subpart of this part exceed 3 years after the effective date of such standard.

(2) If an existing source is subject to a standard established under this part pursuant to section 112(f) of the Act, the owner or operator must comply with the standard by the date 90 days after the standard's effective date, or by the date specified in an extension granted to the source by the Administrator under paragraph (i)(4)(ii) of this section, whichever is later.

(3)-(4) [Reserved]

(5) Except as provided in paragraph (b)(7) of this section, the owner or operator of an area source that increases its emissions of (or its potential to emit) hazardous air pollutants such that the source becomes a major source and meets the definition of an existing source in the applicable major source standard shall be subject to relevant standards for existing sources. Except as provided in paragraph § 63.1(c)(6)(i)(B), such sources must comply by the date specified in the standards for existing area sources that become major sources. If no such compliance date is specified in the standards, the source shall have a period of time to comply with the relevant emission standard that is equivalent to the compliance period specified in the relevant standard for existing sources in existence at the time the standard becomes effective.

(d) [Reserved]

(e) *Operation and maintenance requirements.*

(1) (i) At all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section), review of operation and maintenance records, and inspection of the source.

(ii) Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices.

(iii) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

(2) [Reserved]

(3) *Startup, shutdown, and malfunction plan.*

(i) The owner or operator of an affected source must develop a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The startup, shutdown, and malfunction plan does not need to address any scenario that would not cause the source to exceed an applicable emission limitation in the relevant standard. This plan must be developed by the owner or

operator by the source's compliance date for that relevant standard. The purpose of the startup, shutdown, and malfunction plan is to -

(A) Ensure that, at all times, the owner or operator operates and maintains each affected source, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions established by paragraph (e)(1)(i) of this section;

(B) Ensure that owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

(C) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

(ii) [Reserved]

(iii) When actions taken by the owner or operator during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a “checklist,” or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan and describes the actions taken for that event. In addition, the owner or operator must keep records of these events as specified in paragraph 63.10(b), including records of the occurrence and duration of each startup or shutdown (if the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in § 63.10(d)(5).

(iv) If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the owner or operator must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with § 63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator).

(v) The owner or operator must maintain at the affected source a current startup, shutdown, and malfunction plan and must make the plan available upon request for inspection and copying by the Administrator. In addition, if the startup, shutdown, and malfunction plan is subsequently revised as provided in paragraph (e)(3)(viii) of this section, the owner or operator must maintain at the affected source each previous (i.e., superseded) version of the startup, shutdown, and malfunction plan, and must make each such previous version available for inspection and copying by the Administrator for a period of 5 years after revision of the plan. If at any time after adoption of a startup, shutdown, and malfunction plan the affected source ceases operation or is otherwise no longer subject to the provisions of this part, the owner or operator must retain a copy of the most recent plan for 5 years from the date the source ceases operation or is no longer subject to this part and must make the plan available upon request for inspection and copying by the Administrator. The Administrator may at any time request in writing that the owner or operator submit a copy of any startup, shutdown, and malfunction plan (or a portion thereof) which is

maintained at the affected source or in the possession of the owner or operator. Upon receipt of such a request, the owner or operator must promptly submit a copy of the requested plan (or a portion thereof) to the Administrator. The owner or operator may elect to submit the required copy of any startup, shutdown, and malfunction plan to the Administrator in an electronic format. If the owner or operator claims that any portion of such a startup, shutdown, and malfunction plan is confidential business information entitled to protection from disclosure under section 114(c) of the Act or 40 CFR 2.301, the material which is claimed as confidential must be clearly designated in the submission.

(vi) To satisfy the requirements of this section to develop a startup, shutdown, and malfunction plan, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of this section and are made available for inspection or submitted when requested by the Administrator.

(vii) Based on the results of a determination made under paragraph (e)(1)(i) of this section, the Administrator may require that an owner or operator of an affected source make changes to the startup, shutdown, and malfunction plan for that source. The Administrator must require appropriate revisions to a startup, shutdown, and malfunction plan, if the Administrator finds that the plan:

(A) Does not address a startup, shutdown, or malfunction event that has occurred;

(B) Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions established by paragraph (e)(1)(i) of this section;

(C) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable; or

(D) Includes an event that does not meet the definition of startup, shutdown, or malfunction listed in § 63.2.

(viii) The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of this part or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the Administrator or the permitting authority. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by § 63.10(d)(5). If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the permitting authority.

(ix) The title V permit for an affected source must require that the owner or operator develop a startup, shutdown, and malfunction plan which conforms to the provisions of this part, but may do so by citing to the relevant subpart or subparagraphs of paragraph (e) of this section. However, any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by this part shall

not be deemed to constitute permit revisions under part 70 or part 71 of this chapter and the elements of the startup, shutdown, and malfunction plan shall not be considered an applicable requirement as defined in § 70.2 and § 71.2 of this chapter. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan for an affected source shall be deemed to fall within the permit shield provision in section 504(f) of the Act.

(f) *Compliance with nonopacity emission standards* -

(1) *Applicability.* The non-opacity emission standards set forth in this part shall apply at all times except as otherwise specified in an applicable subpart. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the non-opacity emission standards set forth in this part, then that emission point must still be required to comply with the non-opacity emission standards and other applicable requirements.

(2) *Methods for determining compliance.*

(i) The Administrator will determine compliance with nonopacity emission standards in this part based on the results of performance tests conducted according to the procedures in § 63.7, unless otherwise specified in an applicable subpart of this part.

(ii) The Administrator will determine compliance with nonopacity emission standards in this part by evaluation of an owner or operator's conformance with operation and maintenance requirements, including the evaluation of monitoring data, as specified in § 63.6(e) and applicable subparts of this part.

(iii) If an affected source conducts performance testing at startup to obtain an operating permit in the State in which the source is located, the results of such testing may be used to demonstrate compliance with a relevant standard if -

(A) The performance test was conducted within a reasonable amount of time before an initial performance test is required to be conducted under the relevant standard;

(B) The performance test was conducted under representative operating conditions for the source;

(C) The performance test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in § 63.7(e) of this subpart; and

(D) The performance test was appropriately quality-assured, as specified in § 63.7(c).

(iv) The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in this part by review of records, inspection of the source, and other procedures specified in applicable subparts of this part.

(v) The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in this part by evaluation of an owner or operator's conformance with operation and maintenance requirements, as specified in paragraph (e) of this section and applicable subparts of this part.

(3) *Finding of compliance.* The Administrator will make a finding concerning an affected source's compliance with a non-opacity emission standard, as specified in paragraphs (f)(1) and (2) of this section, upon obtaining all the compliance information required by the relevant standard (including the written reports of performance test results, monitoring results, and other information, if applicable), and information available to the Administrator pursuant to paragraph (e)(1)(i) of this section.

(g) *Use of an alternative nonopacity emission standard.*

(1) If, in the Administrator's judgment, an owner or operator of an affected source has established that an alternative means of emission limitation will achieve a reduction in emissions of a hazardous air pollutant from an affected source at least equivalent to the reduction in emissions of that pollutant from that source achieved under

any design, equipment, work practice, or operational emission standard, or combination thereof, established under this part pursuant to section 112(h) of the Act, the Administrator will publish in the Federal Register a notice permitting the use of the alternative emission standard for purposes of compliance with the promulgated standard. Any Federal Register notice under this paragraph shall be published only after the public is notified and given the opportunity to comment. Such notice will restrict the permission to the stationary source(s) or category(ies) of sources from which the alternative emission standard will achieve equivalent emission reductions. The Administrator will condition permission in such notice on requirements to assure the proper operation and maintenance of equipment and practices required for compliance with the alternative emission standard and other requirements, including appropriate quality assurance and quality control requirements, that are deemed necessary.

(2) An owner or operator requesting permission under this paragraph shall, unless otherwise specified in an applicable subpart, submit a proposed test plan or the results of testing and monitoring in accordance with § 63.7 and § 63.8, a description of the procedures followed in testing or monitoring, and a description of pertinent conditions during testing or monitoring. Any testing or monitoring conducted to request permission to use an alternative nonopacity emission standard shall be appropriately quality assured and quality controlled, as specified in § 63.7 and § 63.8.

(3) The Administrator may establish general procedures in an applicable subpart that accomplish the requirements of paragraphs (g)(1) and (g)(2) of this section.

(h) *Compliance with opacity and visible emission standards* -

(1) *Applicability.* The opacity and visible emission standards set forth in this part must apply at all times except as otherwise specified in an applicable subpart. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the opacity and visible emission standards set forth in this part, then that emission point shall still be required to comply with the opacity and visible emission standards and other applicable requirements.

(2) *Methods for determining compliance.*

(i) The Administrator will determine compliance with opacity and visible emission standards in this part based on the results of the test method specified in an applicable subpart. Whenever a continuous opacity monitoring system (COMS) is required to be installed to determine compliance with numerical opacity emission standards in this part, compliance with opacity emission standards in this part shall be determined by using the results from the COMS. Whenever an opacity emission test method is not specified, compliance with opacity emission standards in this part shall be determined by conducting observations in accordance with Test Method 9 in appendix A of part 60 of this chapter or the method specified in paragraph (h)(7)(ii) of this section. Whenever a visible emission test method is not specified, compliance with visible emission standards in this part shall be determined by conducting observations in accordance with Test Method 22 in appendix A of part 60 of this chapter.

(ii) [Reserved]

(iii) If an affected source undergoes opacity or visible emission testing at startup to obtain an operating permit in the State in which the source is located, the results of such testing may be used to demonstrate compliance with a relevant standard if -

(A) The opacity or visible emission test was conducted within a reasonable amount of time before a performance test is required to be conducted under the relevant standard;

(B) The opacity or visible emission test was conducted under representative operating conditions for the source;

(C) The opacity or visible emission test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in § 63.7(e); and

(D) The opacity or visible emission test was appropriately quality-assured, as specified in § 63.7(c) of this section.

(3) [Reserved]

(4) *Notification of opacity or visible emission observations.* The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting opacity or visible emission observations in accordance with § 63.9(f), if such observations are required for the source by a relevant standard.

(5) *Conduct of opacity or visible emission observations.* When a relevant standard under this part includes an opacity or visible emission standard, the owner or operator of an affected source shall comply with the following:

(i) For the purpose of demonstrating initial compliance, opacity or visible emission observations shall be conducted concurrently with the initial performance test required in § 63.7 unless one of the following conditions applies:

(A) If no performance test under § 63.7 is required, opacity or visible emission observations shall be conducted within 60 days after achieving the maximum production rate at which a new or reconstructed source will be operated, but not later than 120 days after initial startup of the source, or within 120 days after the effective date of the relevant standard in the case of new sources that start up before the standard's effective date. If no performance test under § 63.7 is required, opacity or visible emission observations shall be conducted within 120 days after the compliance date for an existing or modified source; or

(B) If visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under § 63.7, or within the time period specified in paragraph (h)(5)(i)(A) of this section, the source's owner or operator shall reschedule the opacity or visible emission observations as soon after the initial performance test, or time period, as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. The rescheduled opacity or visible emission observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under § 63.7. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity or visible emission observations from being made concurrently with the initial performance test in accordance with procedures contained in Test Method 9 or Test Method 22 in appendix A of part 60 of this chapter.

(ii) For the purpose of demonstrating initial compliance, the minimum total time of opacity observations shall be 3 hours (30 6-minute averages) for the performance test or other required set of observations (e.g., for fugitive-type emission sources subject only to an opacity emission standard).

(iii) The owner or operator of an affected source to which an opacity or visible emission standard in this part applies shall conduct opacity or visible emission observations in accordance with the provisions of this section, record the results of the evaluation of emissions, and report to the Administrator the opacity or visible emission results in accordance with the provisions of § 63.10(d).

(iv) [Reserved]

(v) Opacity readings of portions of plumes that contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity emission standards.

(6) *Availability of records.* The owner or operator of an affected source shall make available, upon request by the Administrator, such records that the Administrator deems necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification.

(7) *Use of a continuous opacity monitoring system.*

(i) The owner or operator of an affected source required to use a continuous opacity monitoring system (COMS) shall record the monitoring data produced during a performance test required under § 63.7 and shall furnish the Administrator a written report of the monitoring results in accordance with the provisions of § 63.10(e)(4).

(ii) Whenever an opacity emission test method has not been specified in an applicable subpart, or an owner or operator of an affected source is required to conduct Test Method 9 observations (see appendix A of part 60 of this chapter), the owner or operator may submit, for compliance purposes, COMS data results produced during any performance test required under § 63.7 in lieu of Method 9 data. If the owner or operator elects to submit COMS data for compliance with the opacity emission standard, he or she shall notify the Administrator of that decision, in writing, simultaneously with the notification under § 63.7(b) of the date the performance test is scheduled to begin. Once the owner or operator of an affected source has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent performance tests required under § 63.7, unless the owner or operator notifies the Administrator in writing to the contrary not later than with the notification under § 63.7(b) of the date the subsequent performance test is scheduled to begin.

(iii) For the purposes of determining compliance with the opacity emission standard during a performance test required under § 63.7 using COMS data, the COMS data shall be reduced to 6-minute averages over the duration of the mass emission performance test.

(iv) The owner or operator of an affected source using a COMS for compliance purposes is responsible for demonstrating that he/she has complied with the performance evaluation requirements of § 63.8(e), that the COMS has been properly maintained, operated, and data quality-assured, as specified in § 63.8(c) and § 63.8(d), and that the resulting data have not been altered in any way.

(v) Except as provided in paragraph (h)(7)(ii) of this section, the results of continuous monitoring by a COMS that indicate that the opacity at the time visual observations were made was not in excess of the emission standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the affected source proves that, at the time of the alleged violation, the instrument used was properly maintained, as specified in § 63.8(c), and met Performance Specification 1 in appendix B of part 60 of this chapter, and that the resulting data have not been altered in any way.

(8) *Finding of compliance.* The Administrator will make a finding concerning an affected source's compliance with an opacity or visible emission standard upon obtaining all the compliance information required by the relevant standard (including the written reports of the results of the performance tests required by § 63.7, the results of Test Method 9 or another required opacity or visible emission test method, the observer certification required by paragraph (h)(6) of this section, and the continuous opacity monitoring system results, whichever is/are applicable) and any information available to the Administrator needed to determine whether proper operation and maintenance practices are being used.

(9) *Adjustment to an opacity emission standard.*

(i) If the Administrator finds under paragraph (h)(8) of this section that an affected source is in compliance with all relevant standards for which initial performance tests were conducted under § 63.7, but during the time such performance tests were conducted fails to meet any relevant opacity emission standard, the owner or operator of such source may petition the Administrator to make appropriate adjustment to the opacity emission standard for the affected source. Until the Administrator notifies the owner or operator of the appropriate adjustment, the relevant opacity emission standard remains applicable.

(ii) The Administrator may grant such a petition upon a demonstration by the owner or operator that -

(A) The affected source and its associated air pollution control equipment were operated and maintained in a manner to minimize the opacity of emissions during the performance tests;

(B) The performance tests were performed under the conditions established by the Administrator; and

(C) The affected source and its associated air pollution control equipment were incapable of being adjusted or operated to meet the relevant opacity emission standard.

(iii) The Administrator will establish an adjusted opacity emission standard for the affected source meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity emission standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity emission standard in the Federal Register.

(iv) After the Administrator promulgates an adjusted opacity emission standard for an affected source, the owner or operator of such source shall be subject to the new opacity emission standard, and the new opacity emission standard shall apply to such source during any subsequent performance tests.

(i) *Extension of compliance with emission standards.*

(1) Until an extension of compliance has been granted by the Administrator (or a State with an approved permit program) under this paragraph, the owner or operator of an affected source subject to the requirements of this section shall comply with all applicable requirements of this part.

(2) *Extension of compliance for early reductions and other reductions* -

(i) *Early reductions.* Pursuant to section 112(i)(5) of the Act, if the owner or operator of an existing source demonstrates that the source has achieved a reduction in emissions of hazardous air pollutants in accordance with the provisions of subpart D of this part, the Administrator (or the State with an approved permit program) will grant the owner or operator an extension of compliance with specific requirements of this part, as specified in subpart D.

(ii) *Other reductions.* Pursuant to section 112(i)(6) of the Act, if the owner or operator of an existing source has installed best available control technology (BACT) (as defined in section 169(3) of the Act) or technology required to meet a lowest achievable emission rate (LAER) (as defined in section 171 of the Act) prior to the promulgation of an emission standard in this part applicable to such source and the same pollutant (or stream of pollutants) controlled pursuant to the BACT or LAER installation, the Administrator will grant the owner or operator an extension of compliance with such emission standard that will apply until the date 5 years after the date on which such installation was achieved, as determined by the Administrator.

(3) *Request for extension of compliance.* Paragraphs (i)(4) through (i)(7) of this section concern requests for an extension of compliance with a relevant standard under this part (except requests for an extension of compliance under paragraph (i)(2)(i) of this section will be handled through procedures specified in subpart D of this part).

(4) (i) (A) The owner or operator of an existing source who is unable to comply with a relevant standard established under this part pursuant to section 112(d) of the Act may request that the Administrator (or a State, when the State has an approved part 70 permit program and the source is required to obtain a part 70 permit under that program, or a State, when the State has been delegated the authority to implement and enforce the emission standard for that source) grant an extension allowing the source up to 1 additional year to comply with the standard, if such additional period is necessary for the installation of controls. An additional extension of up to 3 years may be added for mining waste operations, if the 1-year extension of compliance is insufficient to dry and cover mining waste in order to reduce emissions of any hazardous air pollutant. The owner or operator of an affected source who has requested an extension of compliance under this paragraph and who is otherwise required to obtain a title V permit shall apply for such permit or apply to have the source's title V permit revised to incorporate the conditions of the

extension of compliance. The conditions of an extension of compliance granted under this paragraph will be incorporated into the affected source's title V permit according to the provisions of part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever are applicable.

(B) Any request under this paragraph for an extension of compliance with a relevant standard must be submitted in writing to the appropriate authority no later than 120 days prior to the affected source's compliance date (as specified in paragraphs (b) and (c) of this section), except as provided for in paragraph (i)(4)(i)(C) of this section. Nonfrivolous requests submitted under this paragraph will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the date of denial. Emission standards established under this part may specify alternative dates for the submittal of requests for an extension of compliance if alternatives are appropriate for the source categories affected by those standards.

(C) An owner or operator may submit a compliance extension request after the date specified in paragraph (i)(4)(i)(B) of this section provided the need for the compliance extension arose after that date, and before the otherwise applicable compliance date and the need arose due to circumstances beyond reasonable control of the owner or operator. This request must include, in addition to the information required in paragraph (i)(6)(i) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problems. Nonfrivolous requests submitted under this paragraph will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the original compliance date.

(ii) The owner or operator of an existing source unable to comply with a relevant standard established under this part pursuant to section 112(f) of the Act may request that the Administrator grant an extension allowing the source up to 2 years after the standard's effective date to comply with the standard. The Administrator may grant such an extension if he/she finds that such additional period is necessary for the installation of controls and that steps will be taken during the period of the extension to assure that the health of persons will be protected from imminent endangerment. Any request for an extension of compliance with a relevant standard under this paragraph must be submitted in writing to the Administrator not later than 90 calendar days after the effective date of the relevant standard.

(5) The owner or operator of an existing source that has installed BACT or technology required to meet LAER [as specified in paragraph (i)(2)(ii) of this section] prior to the promulgation of a relevant emission standard in this part may request that the Administrator grant an extension allowing the source 5 years from the date on which such installation was achieved, as determined by the Administrator, to comply with the standard. Any request for an extension of compliance with a relevant standard under this paragraph shall be submitted in writing to the Administrator not later than 120 days after the promulgation date of the standard. The Administrator may grant such an extension if he or she finds that the installation of BACT or technology to meet LAER controls the same pollutant (or stream of pollutants) that would be controlled at that source by the relevant emission standard.

(6) (i) The request for a compliance extension under paragraph (i)(4) of this section shall include the following information:

(A) A description of the controls to be installed to comply with the standard;

(B) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(*1*) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated; and

(*2*) The date by which final compliance is to be achieved.

(*3*) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(*4*) The date by which final compliance is to be achieved;

(C)-(D)

(ii) The request for a compliance extension under paragraph (i)(5) of this section shall include all information needed to demonstrate to the Administrator's satisfaction that the installation of BACT or technology to meet LAER controls the same pollutant (or stream of pollutants) that would be controlled at that source by the relevant emission standard.

(7) Advice on requesting an extension of compliance may be obtained from the Administrator (or the State with an approved permit program).

(8) *Approval of request for extension of compliance.* Paragraphs (i)(9) through (i)(14) of this section concern approval of an extension of compliance requested under paragraphs (i)(4) through (i)(6) of this section.

(9) Based on the information provided in any request made under paragraphs (i)(4) through (i)(6) of this section, or other information, the Administrator (or the State with an approved permit program) may grant an extension of compliance with an emission standard, as specified in paragraphs (i)(4) and (i)(5) of this section.

(10) The extension will be in writing and will -

(i) Identify each affected source covered by the extension;

(ii) Specify the termination date of the extension;

(iii) Specify the dates by which steps toward compliance are to be taken, if appropriate;

(iv) Specify other applicable requirements to which the compliance extension applies (e.g., performance tests); and

(v) (A) Under paragraph (i)(4), specify any additional conditions that the Administrator (or the State) deems necessary to assure installation of the necessary controls and protection of the health of persons during the extension period; or

(B) Under paragraph (i)(5), specify any additional conditions that the Administrator deems necessary to assure the proper operation and maintenance of the installed controls during the extension period.

(11) The owner or operator of an existing source that has been granted an extension of compliance under paragraph (i)(10) of this section may be required to submit to the Administrator (or the State with an approved permit program) progress reports indicating whether the steps toward compliance outlined in the compliance schedule have been reached. The contents of the progress reports and the dates by which they shall be submitted will be specified in the written extension of compliance granted under paragraph (i)(10) of this section.

(12) (i) The Administrator (or the State with an approved permit program) will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (i)(4)(i) or (i)(5) of this section. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the

applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(iii) Before denying any request for an extension of compliance, the Administrator (or the State with an approved permit program) will notify the owner or operator in writing of the Administrator's (or the State's) intention to issue the denial, together with -

(A) Notice of the information and findings on which the intended denial is based; and

(B) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator (or the State) before further action on the request.

(iv) The Administrator's final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(13) (i) The Administrator will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (i)(4)(ii) of this section. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 15 calendar days after receipt of the original application and within 15 calendar days after receipt of any supplementary information that is submitted.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 15 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(iii) Before denying any request for an extension of compliance, the Administrator will notify the owner or operator in writing of the Administrator's intention to issue the denial, together with -

(A) Notice of the information and findings on which the intended denial is based; and

(B) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator before further action on the request.

(iv) A final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(14) The Administrator (or the State with an approved permit program) may terminate an extension of compliance at an earlier date than specified if any specification under paragraph (i)(10)(iii) or (iv) of this section is not met. Upon a determination to terminate, the Administrator will notify, in writing, the owner or operator of the Administrator's determination to terminate, together with:

(i) Notice of the reason for termination; and

(ii) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the determination to terminate, additional information or arguments to the Administrator before further action on the termination.

(iii) A final determination to terminate an extension of compliance will be in writing and will set forth the specific grounds on which the termination is based. The final determination will be made within 30 calendar days after presentation of additional information or arguments, or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(15) [Reserved]

(16) The granting of an extension under this section shall not abrogate the Administrator's authority under section 114 of the Act.

(j) *Exemption from compliance with emission standards.* The President may exempt any stationary source from compliance with any relevant standard established pursuant to section 112 of the Act for a period of not more than 2 years if the President determines that the technology to implement such standard is not available and that it is in the national security interests of the United States to do so. An exemption under this paragraph may be extended for 1 or more additional periods, each period not to exceed 2 years.

§ 63.7 Performance testing requirements.

(a) *Applicability and performance test dates.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) Except as provided in paragraph (a)(4) of this section, if required to do performance testing by a relevant standard, and unless a waiver of performance testing is obtained under this section or the conditions of paragraph (c)(3)(ii)(B) of this section apply, the owner or operator of the affected source must perform such tests within 180 days of the compliance date for such source.

(i)-(viii) [Reserved]

(ix) Except as provided in paragraph (a)(4) of this section, when an emission standard promulgated under this part is more stringent than the standard proposed (see § 63.6(b)(3)), the owner or operator of a new or reconstructed source subject to that standard for which construction or reconstruction is commenced between the proposal and promulgation dates of the standard shall comply with performance testing requirements within 180 days after the standard's effective date, or within 180 days after startup of the source, whichever is later. If the promulgated standard is more stringent than the proposed standard, the owner or operator may choose to demonstrate compliance with either the proposed or the promulgated standard. If the owner or operator chooses to comply with the proposed standard initially, the owner or operator shall conduct a second performance test within 3 years and 180 days after the effective date of the standard, or after startup of the source, whichever is later, to demonstrate compliance with the promulgated standard.

(3) The Administrator may require an owner or operator to conduct performance tests at the affected source at any other time when the action is authorized by section 114 of the Act.

(4) If a force majeure is about to occur, occurs, or has occurred for which the affected owner or operator intends to assert a claim of force majeure:

(i) The owner or operator shall notify the Administrator, in writing as soon as practicable following the date the owner or operator first knew, or through due diligence should have known that the event may cause or caused a delay in testing beyond the regulatory deadline specified in paragraph (a)(2) or (a)(3) of this section, or elsewhere in this part, but the notification must occur before the performance test deadline

unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification shall occur as soon as practicable.

(ii) The owner or operator shall provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in testing beyond the regulatory deadline to the force majeure; describe the measures taken or to be taken to minimize the delay; and identify a date by which the owner or operator proposes to conduct the performance test. The performance test shall be conducted as soon as practicable after the force majeure occurs.

(iii) The decision as to whether or not to grant an extension to the performance test deadline is solely within the discretion of the Administrator. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an extension as soon as practicable.

(iv) Until an extension of the performance test deadline has been approved by the Administrator under paragraphs (a)(4)(i), (a)(4)(ii), and (a)(4)(iii) of this section, the owner or operator of the affected facility remains strictly subject to the requirements of this part.

(b) *Notification of performance test.*

(1) The owner or operator of an affected source must notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the Administrator, upon request, to review an approve the site-specific test plan required under paragraph (c) of this section and to have an observer present during the test.

(2) In the event the owner or operator is unable to conduct the performance test on the date specified in the notification requirement specified in paragraph (b)(1) of this section due to unforeseeable circumstances beyond his or her control, the owner or operator must notify the Administrator as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled. This notification of delay in conducting the performance test shall not relieve the owner or operator of legal responsibility for compliance with any other applicable provisions of this part or with any other applicable Federal, State, or local requirement, nor will it prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(c) *Quality assurance program.*

(1) The results of the quality assurance program required in this paragraph will be considered by the Administrator when he/she determines the validity of a performance test.

(2) (i) *Submission of site-specific test plan.* Before conducting a required performance test, the owner or operator of an affected source shall develop and, if requested by the Administrator, shall submit a site-specific test plan to the Administrator for approval. The test plan shall include a test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance (QA) program. Data quality objectives are the pretest expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision; an example of internal QA is the sampling and analysis of replicate samples.

(iii) The performance testing shall include a test method performance audit (PA) during the performance test. The PAs consist of blind audit samples supplied by an accredited audit sample provider and analyzed during the performance test in order to provide a measure of test data bias. Gaseous audit samples are designed to audit the performance of the sampling system as well as the analytical system and must be collected by the sampling system during the compliance test just as the compliance samples are collected. If a liquid or solid audit sample is designed to audit the sampling system, it must also be collected by the sampling system during the compliance test. If multiple sampling systems or sampling trains are used during

the compliance test for any of the test methods, the tester is only required to use one of the sampling systems per method to collect the audit sample. The audit sample must be analyzed by the same analyst using the same analytical reagents and analytical system and at the same time as the compliance samples. Retests are required when there is a failure to produce acceptable results for an audit sample. However, if the audit results do not affect the compliance or noncompliance status of the affected facility, the compliance authority may waive the reanalysis requirement, further audits, or retests and accept the results of the compliance test. Acceptance of the test results shall constitute a waiver of the reanalysis requirement, further audits, or retests. The compliance authority may also use the audit sample failure and the compliance test results as evidence to determine the compliance or noncompliance status of the affected facility. A blind audit sample is a sample whose value is known only to the sample provider and is not revealed to the tested facility until after they report the measured value of the audit sample. For pollutants that exist in the gas phase at ambient temperature, the audit sample shall consist of an appropriate concentration of the pollutant in air or nitrogen that can be introduced into the sampling system of the test method at or near the same entry point as a sample from the emission source. If no gas phase audit samples are available, an acceptable alternative is a sample of the pollutant in the same matrix that would be produced when the sample is recovered from the sampling system as required by the test method. For samples that exist only in a liquid or solid form at ambient temperature, the audit sample shall consist of an appropriate concentration of the pollutant in the same matrix that would be produced when the sample is recovered from the sampling system as required by the test method. An accredited audit sample provider (AASP) is an organization that has been accredited to prepare audit samples by an independent, third party accrediting body.

(A) The source owner, operator, or representative of the tested facility shall obtain an audit sample, if commercially available, from an AASP for each test method used for regulatory compliance purposes. No audit samples are required for the following test methods: Methods 3A and 3C of appendix A-3 of part 60 of this chapter; Methods 6C, 7E, 9, and 10 of appendix A-4 of part 60; Methods 18 and 19 of appendix A-6 of part 60; Methods 20, 22, and 25A of appendix A-7 of part 60; Methods 30A and 30B of appendix A-8 of part 60; and Methods 303, 318, 320, and 321 of appendix A of this part. If multiple sources at a single facility are tested during a compliance test event, only one audit sample is required for each method used during a compliance test. The compliance authority responsible for the compliance test may waive the requirement to include an audit sample if they believe that an audit sample is not necessary. “Commercially available” means that two or more independent AASPs have blind audit samples available for purchase. If the source owner, operator, or representative cannot find an audit sample for a specific method, the owner, operator, or representative shall consult the EPA Web site at the following URL, *www.epa.gov/ttn/emc,* to confirm whether there is a source that can supply an audit sample for that method. If the EPA Web site does not list an available audit sample at least 60 days prior to the beginning of the compliance test, the source owner, operator, or representative shall not be required to include an audit sample as part of the quality assurance program for the compliance test. When ordering an audit sample, the source owner, operator, or representative shall give the sample provider an estimate for the concentration of each pollutant that is emitted by the source or the estimated concentration of each pollutant based on the permitted level and the name, address, and phone number of the compliance authority. The source owner, operator, or representative shall report the results for the audit sample along with a summary of the emission test results for the audited pollutant to the compliance authority and shall report the results of the audit sample to the AASP. The source owner, operator, or representative shall make both reports at the same time and in the same manner or shall report to the compliance authority first and then report to the AASP. If the method being audited is a method that allows the samples to be analyzed in the field and the tester plans to analyze the samples in the field, the tester may analyze the audit samples prior to collecting the

emission samples provided a representative of the compliance authority is present at the testing site. The tester may request, and the compliance authority may grant, a waiver to the requirement that a representative of the compliance authority must be present at the testing site during the field analysis of an audit sample. The source owner, operator, or representative may report the results of the audit sample to the compliance authority and then report the results of the audit sample to the AASP prior to collecting any emission samples. The test protocol and final test report shall document whether an audit sample was ordered and utilized and the pass/fail results as applicable.

(B) An AASP shall have and shall prepare, analyze, and report the true value of audit samples in accordance with a written technical criteria document that describes how audit samples will be prepared and distributed in a manner that will ensure the integrity of the audit sample program. An acceptable technical criteria document shall contain standard operating procedures for all of the following operations:

(*1*) Preparing the sample;

(*2*) Confirming the true concentration of the sample;

(*3*) Defining the acceptance limits for the results from a well qualified tester. This procedure must use well established statistical methods to analyze historical results from well qualified testers. The acceptance limits shall be set so that there is 95 percent confidence that 90 percent of well qualified labs will produce future results that are within the acceptance limit range;

(*4*) Providing the opportunity for the compliance authority to comment on the selected concentration level for an audit sample;

(*5*) Distributing the sample to the user in a manner that guarantees that the true value of the sample is unknown to the user;

(*6*) Recording the measured concentration reported by the user and determining if the measured value is within acceptable limits;

(*7*) Reporting the results from each audit sample in a timely manner to the compliance authority and to the source owner, operator, or representative by the AASP. The AASP shall make both reports at the same time and in the same manner or shall report to the compliance authority first and then report to the source owner, operator, or representative. The results shall include the name of the facility tested, the date on which the compliance test was conducted, the name of the company performing the sample collection, the name of the company that analyzed the compliance samples including the audit sample, the measured result for the audit sample, and whether the testing company passed or failed the audit. The AASP shall report the true value of the audit sample to the compliance authority. The AASP may report the true value to the source owner, operator, or representative if the AASP's operating plan ensures that no laboratory will receive the same audit sample twice.

(*8*) Evaluating the acceptance limits of samples at least once every two years to determine in consultation with the voluntary consensus standard body if they should be changed.

(*9*) Maintaining a database, accessible to the compliance authorities, of results from the audit that shall include the name of the facility tested, the date on which the compliance test was conducted, the name of the company performing the sample collection, the name of the company that analyzed the compliance samples including the audit sample, the measured result for the audit sample, the true value of the audit sample, the acceptance range for the measured value, and whether the testing company passed or failed the audit.

(C) The accrediting body shall have a written technical criteria document that describes how it will ensure that the AASP is operating in accordance with the AASP technical criteria document that describes how audit samples are to be prepared and distributed. This document shall contain standard operating procedures for all of the following operations:

(*1*) Checking audit samples to confirm their true value as reported by the AASP.

(*2*) Performing technical systems audits of the AASP's facilities and operating procedures at least once every two years.

(*3*) Providing standards for use by the voluntary consensus standard body to approve the accrediting body that will accredit the audit sample providers.

(D) The technical criteria documents for the accredited sample providers and the accrediting body shall be developed through a public process guided by a voluntary consensus standards body (VCSB). The VCSB shall operate in accordance with the procedures and requirements in the Office of Management and Budget *Circular A-119.* A copy of Circular A-119 is available upon request by writing the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, by calling (202) 395-6880 or downloading online at *http://standards.gov/standards_gov/a119.cfm.* The VCSB shall approve all accrediting bodies. The Administrator will review all technical criteria documents. If the technical criteria documents do not meet the minimum technical requirements in paragraphs (c)(2)(iii)(B) through (C) of this section, the technical criteria documents are not acceptable and the proposed audit sample program is not capable of producing audit samples of sufficient quality to be used in a compliance test. All acceptable technical criteria documents shall be posted on the EPA Web site at the following URL, *http://www.epa.gov/ttn/emc.*

(iv) The owner or operator of an affected source shall submit the site-specific test plan to the Administrator upon the Administrator's request at least 60 calendar days before the performance test is scheduled to take place, that is, simultaneously with the notification of intention to conduct a performance test required under paragraph (b) of this section, or on a mutually agreed upon date.

(v) The Administrator may request additional relevant information after the submittal of a site-specific test plan.

(3) *Approval of site-specific test plan.*

(i) The Administrator will notify the owner or operator of approval or intention to deny approval of the site-specific test plan (if review of the site-specific test plan is requested) within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary information that is submitted under paragraph (c)(3)(i)(B) of this section. Before disapproving any site-specific test plan, the Administrator will notify the applicant of the Administrator's intention to disapprove the plan together with -

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present, within 30 calendar days after he/she is notified of the intended disapproval, additional information to the Administrator before final action on the plan.

(ii) In the event that the Administrator fails to approve or disapprove the site-specific test plan within the time period specified in paragraph (c)(3)(i) of this section, the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the test method(s) specified in the relevant standard or with only minor changes to those tests methods (see paragraph (e)(2)(i) of this section), the owner or operator must conduct the performance test within the time specified in this section using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator is authorized to conduct the

performance test using an alternative test method after the Administrator approves the use of the alternative method when the Administrator approves the site-specific test plan (if review of the site-specific test plan is requested) or after the alternative method is approved (see paragraph (f) of this section). However, the owner or operator is authorized to conduct the performance test using an alternative method in the absence of notification of approval 45 days after submission of the site-specific test plan or request to use an alternative method. The owner or operator is authorized to conduct the performance test within 60 calendar days after he/she is authorized to demonstrate compliance using an alternative test method. Notwithstanding the requirements in the preceding three sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.

(iii) Neither the submission of a site-specific test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator's failure to approve or disapprove a plan in a timely manner shall -

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(d) *Performance testing facilities.* If required to do performance testing, the owner or operator of each new source and, at the request of the Administrator, the owner or operator of each existing source, shall provide performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such source. This includes:

(i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(ii) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

(2) Safe sampling platform(s);

(3) Safe access to sampling platform(s);

(4) Utilities for sampling and testing equipment; and

(5) Any other facilities that the Administrator deems necessary for safe and adequate testing of a source.

(e) *Conduct of performance tests.*

(1) Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test, nor shall emissions in excess of the level of the relevant standard during periods of startup, shutdown, and malfunction be considered a violation of the relevant standard unless otherwise specified in the relevant standard or a determination of noncompliance is made under § 63.6(e). Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(2) Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in this section, in each relevant standard, and, if required, in applicable appendices of parts 51, 60, 61, and 63 of this chapter unless the Administrator -

(i) Specifies or approves, in specific cases, the use of a test method with minor changes in methodology (see definition in § 63.90(a)). Such changes may be approved in conjunction with approval of the site-specific test plan (see paragraph (c) of this section); or

(ii) Approves the use of an intermediate or major change or alternative to a test method (see definitions in § 63.90(a)), the results of which the Administrator has determined to be adequate for indicating whether a specific affected source is in compliance; or

(iii) Approves shorter sampling times or smaller sample volumes when necessitated by process variables or other factors; or

(iv) Waives the requirement for performance tests because the owner or operator of an affected source has demonstrated by other means to the Administrator's satisfaction that the affected source is in compliance with the relevant standard.

(3) Unless otherwise specified in a relevant standard or test method, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the relevant standard. For the purpose of determining compliance with a relevant standard, the arithmetic mean of the results of the three runs shall apply. Upon receiving approval from the Administrator, results of a test run may be replaced with results of an additional test run in the event that -

(i) A sample is accidentally lost after the testing team leaves the site; or

(ii) Conditions occur in which one of the three runs must be discontinued because of forced shutdown; or

(iii) Extreme meteorological conditions occur; or

(iv) Other circumstances occur that are beyond the owner or operator's control.

(4) Nothing in paragraphs (e)(1) through (e)(3) of this section shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(f) *Use of an alternative test method* -

(1) *General.* Until authorized to use an intermediate or major change or alternative to a test method, the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) The owner or operator of an affected source required to do performance testing by a relevant standard may use an alternative test method from that specified in the standard provided that the owner or operator -

(i) Notifies the Administrator of his or her intention to use an alternative test method at least 60 days before the performance test is scheduled to begin;

(ii) Uses Method 301 in appendix A of this part to validate the alternative test method. This may include the use of specific procedures of Method 301 if use of such procedures are sufficient to validate the alternative test method; and

(iii) Submits the results of the Method 301 validation process along with the notification of intention and the justification for not using the specified test method. The owner or operator may submit the information required in this paragraph well in advance of the deadline specified in paragraph (f)(2)(i) of this section to ensure a timely review by the Administrator in order to meet the performance test date specified in this section or the relevant standard.

(3) The Administrator will determine whether the owner or operator's validation of the proposed alternative test method is adequate and issue an approval or disapproval of the alternative test method. If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator is authorized to conduct the performance test using an alternative test method after the Administrator approves the use of the alternative method. However, the owner or operator is authorized to conduct

the performance test using an alternative method in the absence of notification of approval/disapproval 45 days after submission of the request to use an alternative method and the request satisfies the requirements in paragraph (f)(2) of this section. The owner or operator is authorized to conduct the performance test within 60 calendar days after he/she is authorized to demonstrate compliance using an alternative test method. Notwithstanding the requirements in the preceding three sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.

(4) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative test method for the purposes of demonstrating compliance with a relevant standard, the Administrator may require the use of a test method specified in a relevant standard.

(5) If the owner or operator uses an alternative test method for an affected source during a required performance test, the owner or operator of such source shall continue to use the alternative test method for subsequent performance tests at that affected source until he or she receives approval from the Administrator to use another test method as allowed under § 63.7(f).

(6) Neither the validation and approval process nor the failure to validate an alternative test method shall abrogate the owner or operator's responsibility to comply with the requirements of this part.

(g) *Data analysis, recordkeeping, and reporting.*

(1) Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, results of a performance test shall include the analysis of samples, determination of emissions, and raw data. A performance test is “completed” when field sample collection is terminated. The owner or operator of an affected source shall report the results of the performance test to the Administrator before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator (see § 63.9(i)). The results of the performance test shall be submitted as part of the notification of compliance status required under § 63.9(h). Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the Administrator. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the appropriate permitting authority.

(2) Contents of a performance test, CMS performance evaluation, or CMS quality assurance test report (electronic or paper submitted copy). Unless otherwise specified in a relevant standard, test method, CMS performance specification, or quality assurance requirement for a CMS, or as otherwise approved by the Administrator in writing, the report shall include the elements identified in paragraphs (g)(2)(i) through (vi) of this section.

(i) General identification information for the facility including a mailing address, the physical address, the owner or operator or responsible official (where applicable) and his/her email address, and the appropriate Federal Registry System (FRS) number for the facility.

(ii) Purpose of the test including the applicable regulation requiring the test, the pollutant(s) and other parameters being measured, the applicable emission standard, and any process parameter component, and a brief process description.

(iii) Description of the emission unit tested including fuel burned, control devices, and vent characteristics; the appropriate source classification code (SCC); the permitted maximum process rate (where applicable); and the sampling location.

(iv) Description of sampling and analysis procedures used and any modifications to standard procedures, quality assurance procedures and results, record of process operating conditions that demonstrate the

applicable test conditions are met, and values for any operating parameters for which limits were being set during the test.

(v) Where a test method, CEMS, PEMS, or COMS performance specification, or on-going quality assurance requirement for a CEMS, PEMS, or COMS requires you record or report, the following shall be included in your report: Record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, chain-of-custody documentation, and example calculations for reported results.

(vi) Identification of the company conducting the performance test including the primary office address, telephone number, and the contact for this test including his/her email address.

(3) For a minimum of 5 years after a performance test is conducted, the owner or operator shall retain and make available, upon request, for inspection by the Administrator the records or results of such performance test and other data needed to determine emissions from an affected source.

(h) *Waiver of performance tests.*

(1) Until a waiver of a performance testing requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Individual performance tests may be waived upon written application to the Administrator if, in the Administrator's judgment, the source is meeting the relevant standard(s) on a continuous basis, or the source is being operated under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) *Request to waive a performance test.*

(i) If a request is made for an extension of compliance under § 63.6(i), the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested or if the owner or operator has requested an extension of compliance and the Administrator is still considering that request, the application for a waiver of an initial performance test shall be submitted at least 60 days before the performance test if the site-specific test plan under paragraph (c) of this section is not submitted.

(ii) If an application for a waiver of a subsequent performance test is made, the application may accompany any required compliance progress report, compliance status report, or excess emissions and continuous monitoring system performance report [such as those required under § 63.6(i), § 63.9(h), and § 63.10(e) or specified in a relevant standard or in the source's title V permit], but it shall be submitted at least 60 days before the performance test if the site-specific test plan required under paragraph (c) of this section is not submitted.

(iii) Any application for a waiver of a performance test shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test.

(4) *Approval of request to waive performance test.* The Administrator will approve or deny a request for a waiver of a performance test made under paragraph (h)(3) of this section when he/she -

(i) Approves or denies an extension of compliance under § 63.6(i)(8); or

(ii) Approves or disapproves a site-specific test plan under § 63.7(c)(3); or

(iii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

(iv) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

§ 63.8 Monitoring requirements.

(a) *Applicability.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For the purposes of this part, all CMS required under relevant standards shall be subject to the provisions of this section upon promulgation of performance specifications for CMS as specified in the relevant standard or otherwise by the Administrator.

(3) [Reserved]

(4) Additional monitoring requirements for control devices used to comply with provisions in relevant standards of this part are specified in § 63.11.

(b) *Conduct of monitoring.*

(1) Monitoring shall be conducted as set forth in this section and the relevant standard(s) unless the Administrator -

(i) Specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures (see § 63.90(a) for definition); or

(ii) Approves the use of an intermediate or major change or alternative to any monitoring requirements or procedures (see § 63.90(a) for definition).

(iii) Owners or operators with flares subject to § 63.11(b) are not subject to the requirements of this section unless otherwise specified in the relevant standard.

(2) (i) When the emissions from two or more affected sources are combined before being released to the atmosphere, the owner or operator may install an applicable CMS for each emission stream or for the combined emissions streams, provided the monitoring is sufficient to demonstrate compliance with the relevant standard.

(ii) If the relevant standard is a mass emission standard and the emissions from one affected source are released to the atmosphere through more than one point, the owner or operator must install an applicable CMS at each emission point unless the installation of fewer systems is -

(A) Approved by the Administrator; or

(B) Provided for in a relevant standard (e.g., instead of requiring that a CMS be installed at each emission point before the effluents from those points are channeled to a common control device, the standard specifies that only one CMS is required to be installed at the vent of the control device).

(3) When more than one CMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CMS. However, when one CMS is used as a backup to another CMS, the owner or operator shall report the results from the CMS used to meet the monitoring requirements of this part. If both such CMS are used during a particular reporting period to meet the monitoring requirements of this part, then the owner or operator shall report the results from each CMS for the relevant compliance period.

(c) *Operation and maintenance of continuous monitoring systems.*

(1) The owner or operator of an affected source shall maintain and operate each CMS as specified in this section, or in a relevant standard, and in a manner consistent with good air pollution control practices.

(i) The owner or operator of an affected source must maintain and operate each CMS as specified in § 63.6(e)(1).

(ii) The owner or operator must keep the necessary parts for routine repairs of the affected CMS equipment readily available.

(iii) The owner or operator of an affected source must develop a written startup, shutdown, and malfunction plan for CMS as specified in § 63.6(e)(3).

(2) (i) All CMS must be installed such that representative measures of emissions or process parameters from the affected source are obtained. In addition, CEMS must be located according to procedures contained in the applicable performance specification(s).

(ii) Unless the individual subpart states otherwise, the owner or operator must ensure the read out (that portion of the CMS that provides a visual display or record), or other indication of operation, from any CMS required for compliance with the emission standard is readily accessible on site for operational control or inspection by the operator of the equipment.

(3) All CMS shall be installed, operational, and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests under § 63.7. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.

(4) Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(i) All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(ii) All CEMS for measuring emissions other than opacity shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(5) Unless otherwise approved by the Administrator, minimum procedures for COMS shall include a method for producing a simulated zero opacity condition and an upscale (high-level) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of all the analyzer's internal optical surfaces and all electronic circuitry, including the lamp and photodetector assembly normally used in the measurement of opacity.

(6) The owner or operator of a CMS that is not a CPMS, which is installed in accordance with the provisions of this part and the applicable CMS performance specification(s), must check the zero (low-level) and high-level calibration drifts at least once daily in accordance with the written procedure specified in the performance evaluation plan developed under paragraphs (e)(3)(i) and (ii) of this section. The zero (low-level) and high-level calibration drifts must be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds two times the limits of the applicable performance specification(s) specified in the relevant standard. The system shall allow the amount of excess zero (low-level) and high-level drift measured at the 24-hour interval checks to be recorded and quantified whenever specified. For COMS, all optical and instrumental surfaces exposed to the effluent gases must be cleaned prior to performing the zero (low-level) and high-level drift adjustments; the optical surfaces and instrumental surfaces must be cleaned when the cumulative automatic zero compensation, if applicable, exceeds 4 percent opacity. The CPMS must be calibrated prior to use for the purposes of complying with this section. The CPMS must be checked daily for indication that the system is responding. If the CPMS system includes an internal system check, results must be recorded and checked daily for proper operation.

(7) (i) A CMS is out of control if -

(A) The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard; or

(B) The CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or

(C) The COMS CD exceeds two times the limit in the applicable performance specification in the relevant standard.

(ii) When the CMS is out of control, the owner or operator of the affected source shall take the necessary corrective action and shall repeat all necessary tests which indicate that the system is out of control. The owner or operator shall take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour the owner or operator conducts a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under this part. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. During the period the CMS is out of control, recorded data shall not be used in data averages and calculations, or to meet any data availability requirement established under this part.

(8) The owner or operator of a CMS that is out of control as defined in paragraph (c)(7) of this section shall submit all information concerning out-of-control periods, including start and end dates and hours and descriptions of corrective actions taken, in the excess emissions and continuous monitoring system performance report required in § 63.10(e)(3).

(d) *Quality control program.*

(1) The results of the quality control program required in this paragraph will be considered by the Administrator when he/she determines the validity of monitoring data.

(2) The owner or operator of an affected source that is required to use a CMS and is subject to the monitoring requirements of this section and a relevant standard shall develop and implement a CMS quality control program. As part of the quality control program, the owner or operator shall develop and submit to the Administrator for approval upon request a site-specific performance evaluation test plan for the CMS performance evaluation required in paragraph (e)(3)(i) of this section, according to the procedures specified in paragraph (e). In addition, each quality control program shall include, at a minimum, a written protocol that describes procedures for each of the following operations:

(i) Initial and any subsequent calibration of the CMS;

(ii) Determination and adjustment of the calibration drift of the CMS;

(iii) Preventive maintenance of the CMS, including spare parts inventory;

(iv) Data recording, calculations, and reporting;

(v) Accuracy audit procedures, including sampling and analysis methods; and

(vi) Program of corrective action for a malfunctioning CMS.

(3) The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where

relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts.

(e) *Performance evaluation of continuous monitoring systems* -

(1) *General.* When required by a relevant standard, and at any other time the Administrator may require under section 114 of the Act, the owner or operator of an affected source being monitored shall conduct a performance evaluation of the CMS. Such performance evaluation shall be conducted according to the applicable specifications and procedures described in this section or in the relevant standard.

(2) *Notification of performance evaluation.* The owner or operator shall notify the Administrator in writing of the date of the performance evaluation simultaneously with the notification of the performance test date required under § 63.7(b) or at least 60 days prior to the date the performance evaluation is scheduled to begin if no performance test is required.

(3) (i) *Submission of site-specific performance evaluation test plan.* Before conducting a required CMS performance evaluation, the owner or operator of an affected source shall develop and submit a site-specific performance evaluation test plan to the Administrator for approval upon request. The performance evaluation test plan shall include the evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives, and both an internal and external QA program. Data quality objectives are the pre-evaluation expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of CMS performance. The external QA program shall include, at a minimum, systems audits that include the opportunity for on-site evaluation by the Administrator of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(iii) The owner or operator of an affected source shall submit the site-specific performance evaluation test plan to the Administrator (if requested) at least 60 days before the performance test or performance evaluation is scheduled to begin, or on a mutually agreed upon date, and review and approval of the performance evaluation test plan by the Administrator will occur with the review and approval of the site-specific test plan (if review of the site-specific test plan is requested).

(iv) The Administrator may request additional relevant information after the submittal of a site-specific performance evaluation test plan.

(v) In the event that the Administrator fails to approve or disapprove the site-specific performance evaluation test plan within the time period specified in § 63.7(c)(3), the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the monitoring method(s) specified in the relevant standard, the owner or operator shall conduct the performance evaluation within the time specified in this subpart using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to a monitoring method specified in the relevant standard, the owner or operator shall refrain from conducting the performance evaluation until the Administrator approves the use of the alternative method. If the Administrator does not approve the use of the alternative method within 30 days before the performance evaluation is scheduled to begin, the performance evaluation deadlines specified in paragraph (e)(4) of this section may be extended such that the owner or operator shall conduct the performance evaluation within 60 calendar days after the Administrator approves the use of the alternative method. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance evaluation as required in this

section (without the Administrator's prior approval of the site-specific performance evaluation test plan) if he/she subsequently chooses to use the specified monitoring method(s) instead of an alternative.

(vi) Neither the submission of a site-specific performance evaluation test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator's failure to approve or disapprove a plan in a timely manner shall -

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(4) *Conduct of performance evaluation and performance evaluation dates.* The owner or operator of an affected source shall conduct a performance evaluation of a required CMS during any performance test required under § 63.7 in accordance with the applicable performance specification as specified in the relevant standard. Notwithstanding the requirement in the previous sentence, if the owner or operator of an affected source elects to submit COMS data for compliance with a relevant opacity emission standard as provided under § 63.6(h)(7), he/she shall conduct a performance evaluation of the COMS as specified in the relevant standard, before the performance test required under § 63.7 is conducted in time to submit the results of the performance evaluation as specified in paragraph (e)(5)(ii) of this section. If a performance test is not required, or the requirement for a performance test has been waived under § 63.7(h), the owner or operator of an affected source shall conduct the performance evaluation not later than 180 days after the appropriate compliance date for the affected source, as specified in § 63.7(a), or as otherwise specified in the relevant standard.

(5) *Reporting performance evaluation results.*

(i) The owner or operator shall furnish the Administrator a copy of a written report of the results of the performance evaluation containing the information specified in § 63.7(g)(2)(i) through (vi) simultaneously with the results of the performance test required under § 63.7 or within 60 days of completion of the performance evaluation, unless otherwise specified in a relevant standard.

(ii) The owner or operator of an affected source using a COMS to determine opacity compliance during any performance test required under § 63.7 and described in § 63.6(d)(6) shall furnish the Administrator two or, upon request, three copies of a written report of the results of the COMS performance evaluation under this paragraph. The copies shall be provided at least 15 calendar days before the performance test required under § 63.7 is conducted.

(f) *Use of an alternative monitoring method* -

(1) *General.* Until permission to use an alternative monitoring procedure (minor, intermediate, or major changes; see definition in § 63.90(a)) has been granted by the Administrator under this paragraph (f)(1), the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring methods or procedures of this part including, but not limited to, the following:

(i) Alternative monitoring requirements when installation of a CMS specified by a relevant standard would not provide accurate measurements due to liquid water or other interferences caused by substances within the effluent gases;

(ii) Alternative monitoring requirements when the affected source is infrequently operated;

(iii) Alternative monitoring requirements to accommodate CEMS that require additional measurements to correct for stack moisture conditions;

(iv) Alternative locations for installing CMS when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements;

(v) Alternate methods for converting pollutant concentration measurements to units of the relevant standard;

(vi) Alternate procedures for performing daily checks of zero (low-level) and high-level drift that do not involve use of high-level gases or test cells;

(vii) Alternatives to the American Society for Testing and Materials (ASTM) test methods or sampling procedures specified by any relevant standard;

(viii) Alternative CMS that do not meet the design or performance requirements in this part, but adequately demonstrate a definite and consistent relationship between their measurements and the measurements of opacity by a system complying with the requirements as specified in the relevant standard. The Administrator may require that such demonstration be performed for each affected source; or

(ix) Alternative monitoring requirements when the effluent from a single affected source or the combined effluent from two or more affected sources is released to the atmosphere through more than one point.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement, or procedure, the Administrator may require the use of a method, requirement, or procedure specified in this section or in the relevant standard. If the results of the specified and alternative method, requirement, or procedure do not agree, the results obtained by the specified method, requirement, or procedure shall prevail.

(4) (i) *Request to use alternative monitoring procedure.* An owner or operator who wishes to use an alternative monitoring procedure must submit an application to the Administrator as described in paragraph (f)(4)(ii) of this section. The application may be submitted at any time provided that the monitoring procedure is not the performance test method used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring procedure will serve as the performance test method that is to be used to demonstrate compliance with a relevant standard, the application must be submitted at least 60 days before the performance evaluation is scheduled to begin and must meet the requirements for an alternative test method under § 63.7(f).

(ii) The application must contain a description of the proposed alternative monitoring system which addresses the four elements contained in the definition of monitoring in § 63.2 and a performance evaluation test plan, if required, as specified in paragraph (e)(3) of this section. In addition, the application must include information justifying the owner or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

(iii) The owner or operator may submit the information required in this paragraph well in advance of the submittal dates specified in paragraph (f)(4)(i) above to ensure a timely review by the Administrator in order to meet the compliance demonstration date specified in this section or the relevant standard.

(iv) Application for minor changes to monitoring procedures, as specified in paragraph (b)(1) of this section, may be made in the site-specific performance evaluation plan.

(5) *Approval of request to use alternative monitoring procedure.*

(i) The Administrator will notify the owner or operator of approval or intention to deny approval of the request to use an alternative monitoring method within 30 calendar days after receipt of the original request and within 30 calendar days after receipt of any supplementary information that is submitted. If a request for a minor change is made in conjunction with site-specific performance evaluation plan, then approval of the plan will constitute approval of the minor change. Before disapproving any request to use an

alternative monitoring method, the Administrator will notify the applicant of the Administrator's intention to disapprove the request together with -

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present additional information to the Administrator before final action on the request. At the time the Administrator notifies the applicant of his or her intention to disapprove the request, the Administrator will specify how much time the owner or operator will have after being notified of the intended disapproval to submit the additional information.

(ii) The Administrator may establish general procedures and criteria in a relevant standard to accomplish the requirements of paragraph (f)(5)(i) of this section.

(iii) If the Administrator approves the use of an alternative monitoring method for an affected source under paragraph (f)(5)(i) of this section, the owner or operator of such source shall continue to use the alternative monitoring method until he or she receives approval from the Administrator to use another monitoring method as allowed by § 63.8(f).

(6) *Alternative to the relative accuracy test.* An alternative to the relative accuracy test for CEMS specified in a relevant standard may be requested as follows:

(i) *Criteria for approval of alternative procedures.* An alternative to the test method for determining relative accuracy is available for affected sources with emission rates demonstrated to be less than 50 percent of the relevant standard. The owner or operator of an affected source may petition the Administrator under paragraph (f)(6)(ii) of this section to substitute the relative accuracy test in section 7 of Performance Specification 2 with the procedures in section 10 if the results of a performance test conducted according to the requirements in § 63.7, or other tests performed following the criteria in § 63.7, demonstrate that the emission rate of the pollutant of interest in the units of the relevant standard is less than 50 percent of the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the owner or operator may petition the Administrator to substitute the relative accuracy test with the procedures in section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the CEMS is used continuously to determine compliance with the relevant standard.

(ii) *Petition to use alternative to relative accuracy test.* The petition to use an alternative to the relative accuracy test shall include a detailed description of the procedures to be applied, the location and the procedure for conducting the alternative, the concentration or response levels of the alternative relative accuracy materials, and the other equipment checks included in the alternative procedure(s). The Administrator will review the petition for completeness and applicability. The Administrator's determination to approve an alternative will depend on the intended use of the CEMS data and may require specifications more stringent than in Performance Specification 2.

(iii) *Rescission of approval to use alternative to relative accuracy test.* The Administrator will review the permission to use an alternative to the CEMS relative accuracy test and may rescind such permission if the CEMS data from a successful completion of the alternative relative accuracy procedure indicate that the affected source's emissions are approaching the level of the relevant standard. The criterion for reviewing the permission is that the collection of CEMS data shows that emissions have exceeded 70 percent of the relevant standard for any averaging period, as specified in the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the criterion for reviewing the permission is that the collection of CEMS data shows that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for any averaging period, as specified in the relevant standard. The owner or operator of the affected source shall maintain records and determine the

level of emissions relative to the criterion for permission to use an alternative for relative accuracy testing. If this criterion is exceeded, the owner or operator shall notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increased emissions. The Administrator will review the notification and may rescind permission to use an alternative and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in section 7 of Performance Specification 2. The Administrator will review the notification and may rescind permission to use an alternative and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in section 8.4 of Performance Specification 2.

(g) *Reduction of monitoring data.*

(1) The owner or operator of each CMS must reduce the monitoring data as specified in paragraphs (g)(1) through (5) of this section.

(2) The owner or operator of each COMS shall reduce all data to 6-minute averages calculated from 36 or more data points equally spaced over each 6-minute period. Data from CEMS for measurement other than opacity, unless otherwise specified in the relevant standard, shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities pursuant to provisions of this part are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. Time periods for averaging are defined in § 63.2.

(3) The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant).

(4) All emission data shall be converted into units of the relevant standard for reporting purposes using the conversion procedures specified in that standard. After conversion into units of the relevant standard, the data may be rounded to the same number of significant digits as used in that standard to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

(5) Monitoring data recorded during periods of unavoidable CMS breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level adjustments must not be included in any data average computed under this part. For the owner or operator complying with the requirements of § 63.10(b)(2)(vii)(A) or (B), data averages must include any data recorded during periods of monitor breakdown or malfunction.

§ 63.9 Notification requirements.

(a) *Applicability and general information.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For affected sources that have been granted an extension of compliance under subpart D of this part, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.

(3) If any State requires a notice that contains all the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.

(4) (i) Before a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).

(ii) After a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each notification submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any notifications at its discretion.

(b) *Initial notifications.*

(1) (i) The requirements of this paragraph apply to the owner or operator of an affected source when such source becomes subject to a relevant standard.

(ii) If an area source subsequently becomes a major source that is subject to the emission standard or other requirement, such source shall be subject to the notification requirements of this section. Area sources previously subject to major source requirements that become major sources again are also subject to the notification requirements of this paragraph and must submit the notification according to the requirements of paragraph (k) of this section.

(iii) Affected sources that are required under this paragraph to submit an initial notification may use the application for approval of construction or reconstruction under § 63.5(d) of this subpart, if relevant, to fulfill the initial notification requirements of this paragraph.

(2) The owner or operator of an affected source that has an initial startup before the effective date of a relevant standard under this part shall notify the Administrator in writing that the source is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after the effective date of the relevant standard (or within 120 calendar days after the source becomes subject to the relevant standard), shall provide the following information:

(i) The name and address of the owner or operator;

(ii) The address (i.e., physical location) of the affected source;

(iii) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;

(iv) A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and

(v) A statement of whether the affected source is a major source or an area source.

(3) [Reserved]

(4) The owner or operator of a new or reconstructed major affected source for which an application for approval of construction or reconstruction is required under § 63.5(d) must provide the following information in writing to the Administrator:

(i) A notification of intention to construct a new major-emitting affected source, reconstruct a major-emitting affected source, or reconstruct a major source such that the source becomes a major-emitting affected source with the application for approval of construction or reconstruction as specified in § 63.5(d)(1)(i); and

(ii)-(iv) [Reserved]

(v) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

(5) The owner or operator of a new or reconstructed affected source for which an application for approval of construction or reconstruction is not required under § 63.5(d) must provide the following information in writing to the Administrator:

(i) A notification of intention to construct a new affected source, reconstruct an affected source, or reconstruct a source such that the source becomes an affected source, and

(ii) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

(iii) Unless the owner or operator has requested and received prior permission from the Administrator to submit less than the information in § 63.5(d), the notification must include the information required on the application for approval of construction or reconstruction as specified in § 63.5(d)(1)(i).

(c) *Request for extension of compliance.* If the owner or operator of an affected source cannot comply with a relevant standard by the applicable compliance date for that source, or if the owner or operator has installed BACT or technology to meet LAER consistent with § 63.6(i)(5) of this subpart, he/she may submit to the Administrator (or the State with an approved permit program) a request for an extension of compliance as specified in § 63.6(i)(4) through § 63.6(i)(6).

(d) *Notification that source is subject to special compliance requirements.* An owner or operator of a new source that is subject to special compliance requirements as specified in § 63.6(b)(3) and § 63.6(b)(4) shall notify the Administrator of his/her compliance obligations not later than the notification dates established in paragraph (b) of this section for new sources that are not subject to the special provisions.

(e) *Notification of performance test.* The owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the Administrator to review and approve the site-specific test plan required under § 63.7(c), if requested by the Administrator, and to have an observer present during the test.

(f) *Notification of opacity and visible emission observations.* The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting the opacity or visible emission observations specified in § 63.6(h)(5), if such observations are required for the source by a relevant standard. The notification shall be submitted with the notification of the performance test date, as specified in paragraph (e) of this section, or if no performance test is required or visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under § 63.7, the owner or operator shall deliver or postmark the notification not less than 30 days before the opacity or visible emission observations are scheduled to take place.

(g) *Additional notification requirements for sources with continuous monitoring systems.* The owner or operator of an affected source required to use a CMS by a relevant standard shall furnish the Administrator written notification as follows:

(1) A notification of the date the CMS performance evaluation under § 63.8(e) is scheduled to begin, submitted simultaneously with the notification of the performance test date required under § 63.7(b). If no performance test is required, or if the requirement to conduct a performance test has been waived for an affected source under § 63.7(h), the owner or operator shall notify the Administrator in writing of the date of the performance evaluation at least 60 calendar days before the evaluation is scheduled to begin;

(2) A notification that COMS data results will be used to determine compliance with the applicable opacity emission standard during a performance test required by § 63.7 in lieu of Method 9 or other opacity emissions test method data, as allowed by § 63.6(h)(7)(ii), if compliance with an opacity emission standard is required for the source by a relevant standard. The notification shall be submitted at least 60 calendar days before the performance test is scheduled to begin; and

(3) A notification that the criterion necessary to continue use of an alternative to relative accuracy testing, as provided by § 63.8(f)(6), has been exceeded. The notification shall be delivered or postmarked not later than 10 days after the occurrence of such exceedance, and it shall include a description of the nature and cause of the increased emissions.

(h) *Notification of compliance status.*

(1) The requirements of paragraphs (h)(2) through (h)(4) of this section apply when an affected source becomes subject to a relevant standard.

(2) (i) Before a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit to the Administrator a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list -

(A) The methods that were used to determine compliance;

(B) The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;

(C) The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;

(D) The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard;

(E) If the relevant standard applies to both major and area sources, an analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification);

(F) A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method); and

(G) A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements.

(ii) The notification must be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration activity specified in the relevant standard (unless a different reporting period is specified in the standard, in which case the letter must be sent before the close of business on the day the report of the relevant testing or monitoring results is required to be delivered or postmarked). For example, the notification shall be sent before close of business on the 60th (or other required) day following completion of the initial performance test and again before the close of business on the 60th (or other required) day following the completion of any subsequent required performance test. If no performance test is required but opacity or visible emission observations are required to demonstrate compliance with an opacity or visible emission standard under this part, the notification of compliance status shall be sent before close of business on the 30th day following the completion of opacity or visible emission observations. Notifications may be combined as long as the due date requirement for each notification is met.

(3) After a title V permit has been issued to the owner or operator of an affected source, the owner or operator of such source shall comply with all requirements for compliance status reports contained in the source's title V permit, including reports required under this part. After a title V permit has been issued to the owner or operator of an

affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit the notification of compliance status to the appropriate permitting authority following completion of the relevant compliance demonstration activity specified in the relevant standard.

(4) [Reserved]

(5) If an owner or operator of an affected source submits estimates or preliminary information in the application for approval of construction or reconstruction required in § 63.5(d) in place of the actual emissions data or control efficiencies required in paragraphs (d)(1)(ii)(H) and (d)(2) of § 63.5, the owner or operator shall submit the actual emissions data and other correct information as soon as available but no later than with the initial notification of compliance status required in this section.

(6) Advice on a notification of compliance status may be obtained from the Administrator.

(i) *Adjustment to time periods or postmark deadlines for submittal and review of required communications.*

(1) (i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (i)(2) and (i)(3) of this section, the owner or operator of an affected source remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (i)(2) and (i)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

(j) *Change in information already provided.* Any change in the information already provided under this section shall be provided to the Administrator within 15 calendar days after the change. The owner or operator of a major source that reclassifies to area source status is also subject to the notification requirements of this paragraph. The owner or operator may submit the application for reclassification with the regulatory authority (*e.g.,* permit application) according to paragraph (k) of this section to fulfill the requirements of this paragraph, but the information required in paragraphs (j)(1) through (4) of this section must be included. A source which reclassified after January 25, 2018, and before January 19, 2021, and has not yet provided the notification of a change in information is required to provide such notification no later than February 2, 2021, according to the requirements of paragraph (k) of this section. Beginning January 19, 2021, the owner or operator of a major source that reclassifies to area source status must submit the notification according to the requirements of paragraph (k) of this section. A notification of reclassification must contain the following information:

(1) The name and address of the owner or operator;

(2) The address (*i.e.,* physical location) of the affected source;

(3) An identification of the standard being reclassified from and to (if applicable); and

(4) Date of effectiveness of the reclassification.

(k) *Electronic submission of notifications or reports.* If you are required to submit notifications or reports following the procedure specified in this paragraph (k), you must submit notifications or reports to the EPA via the EPA's Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). The notification or report must be submitted by the deadline specified. The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as confidential business information (CBI). Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information in the report or notification, you must submit the information claimed to be CBI according to the procedures in paragraph (k)(3) of this section.

(1) If you are required to electronically submit a notification or report by this paragraph (k) through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with the electronic submittal requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (k)(1)(i) through (vii) of this section.

(i) You must have been or will be precluded from accessing CEDRI and submitting a required notification or report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(ii) The outage must have occurred within the period of time beginning 5 business days prior to the date that the notification or report is due.

(iii) The outage may be planned or unplanned.

(iv) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(v) You must provide to the Administrator a written description identifying:

(A) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(B) A rationale for attributing the delay in submitting beyond the regulatory deadline to EPA system outage;

(C) Measures taken or to be taken to minimize the delay in submitting; and

(D) The date by which you propose to submit, or if you have already met the electronic submittal requirement in this paragraph (k) at the time of the notification, the date you submitted the notification or report.

(vi) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(vii) In any circumstance, the notification or report must be submitted electronically as soon as possible after the outage is resolved.

(2) If you are required to electronically submit a notification or report by this paragraph (k) through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the electronic submittal requirement. To assert a claim of force majeure, you must meet the requirements outlined in paragraphs (k)(2)(i) through (v) of this section.

(i) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any

entity controlled by the affected facility that prevents you from complying with the requirement to submit a notification or report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.,* hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.,* large scale power outage).

(ii) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in submitting through CEDRI.

(iii) You must provide to the Administrator:

(A) A written description of the force majeure event;

(B) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(C) Measures taken or to be taken to minimize the delay in reporting; and

(D) The date by which you propose to submit the notification or report, or if you have already met the electronic submittal requirement in this paragraph (k) at the time of the notification, the date you submitted the notification or report.

(iv) The decision to accept the claim of force majeure and allow an extension to the submittal deadline is solely within the discretion of the Administrator.

(v) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

(3) If you wish to assert a CBI claim for some of the information submitted under paragraph (k) of this section, you must submit a complete file, including information claimed to be CBI, to the EPA following the procedures in paragraphs (k)(3)(i) through (iv) of this section. Where a subpart specifies a specific file format for the report or notification for which you are asserting a claim of CBI, the complete file that you submit under this paragraph (k)(3) must be in the same file format specified in the subpart.

(i) Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data are not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

(ii) You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described in paragraph (k) of this section.

(iii) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address *oaqpscbi@epa.gov,* and as described above, should include clear CBI markings. Electronic Reporting Tool (ERT) files should be flagged to the attention of the Group Leader, Measurement Policy Group; all other files should be flagged to the attention of the Sector Lead for the subpart for which you are submitting your notification or report. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email *oaqpscbi@epa.gov* to request a file transfer link.

(iv) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: U.S. EPA, Attn: OAQPS Document Control Officer, Mail Drop: C404-02, 109 T.W. Alexander Drive, P.O. Box 12055, RTP, NC 27711. ERT files should also be flagged to the attention of the

Group Leader, Measurement Policy Group; all other files should also be flagged to the attention of the Sector Lead for the subpart for which you are submitting your notification or report. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

§ 63.10 Recordkeeping and reporting requirements.

(a) *Applicability and general information.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For affected sources that have been granted an extension of compliance under subpart D of this part, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.

(3) If any State requires a report that contains all the information required in a report listed in this section, an owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.

(4) (i) Before a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).

(ii) After a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each report submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any reports at its discretion.

(5) If an owner or operator of an affected source in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such source under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. For each relevant standard established pursuant to section 112 of the Act, the allowance in the previous sentence applies in each State beginning 1 year after the affected source's compliance date for that standard. Procedures governing the implementation of this provision are specified in § 63.9(i).

(6) If an owner or operator supervises one or more stationary sources affected by more than one standard established pursuant to section 112 of the Act, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State permitting authority) a common schedule on which periodic reports required for each source shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the latest compliance date for any relevant standard established pursuant to section 112 of the Act for any such affected source(s). Procedures governing the implementation of this provision are specified in § 63.9(i).

(7) If an owner or operator supervises one or more stationary sources affected by standards established pursuant to section 112 of the Act (as amended November 15, 1990) and standards set under part 60, part 61, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State permitting authority) a common schedule on which periodic reports required by each relevant (i.e., applicable) standard shall be submitted throughout the year. The allowance in the previous sentence applies in each

State beginning 1 year after the stationary source is required to be in compliance with the relevant section 112 standard, or 1 year after the stationary source is required to be in compliance with the applicable part 60 or part 61 standard, whichever is latest. Procedures governing the implementation of this provision are specified in § 63.9(i).

(b) *General recordkeeping requirements.*

(1) The owner or operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(2) The owner or operator of an affected source subject to the provisions of this part shall maintain relevant records for such source of -

(i) The occurrence and duration of each startup or shutdown when the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards;

(ii) The occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment;

(iii) All required maintenance performed on the air pollution control and monitoring equipment;

(iv) (A) Actions taken during periods of startup or shutdown when the source exceeded applicable emission limitations in a relevant standard and when the actions taken are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see § 63.6(e)(3)); or

(B) Actions taken during periods of malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when the actions taken are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see § 63.6(e)(3));

(v) All information necessary, including actions taken, to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see § 63.6(e)(3)) when all actions taken during periods of startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a “checklist,” or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);

(vi) Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);

(vii) All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);

(A) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall

retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

(B) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

(C) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (b)(2)(vii), if the administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

(viii) All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;

(ix) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;

(x) All CMS calibration checks;

(xi) All adjustments and maintenance performed on CMS;

(xii) Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements under this part, if the source has been granted a waiver under paragraph (f) of this section;

(xiii) All emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the source has been granted such permission under § 63.8(f)(6); and

(xiv) All documentation supporting initial notifications and notifications of compliance status under § 63.9.

(3) If an owner or operator determines that his or her existing or new stationary source is in the source category regulated by a standard established pursuant to section 112 of the Act, but that source is not subject to the relevant standard (or other requirement established under this part) because of enforceable limitations on the source's potential to emit, or the source otherwise qualifies for an exclusion, the owner or operator must keep a record of the applicability determination. The applicability determination must be kept on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source subject to the relevant standard (or other requirement established under this part), whichever comes first if the determination is made prior to January 19, 2021. The applicability determination must be kept until the source changes its operations to become an affected source subject to the relevant standard (or other requirement established under this part) if the determination was made on or after January 19, 2021. The record of the applicability determination must be signed by the person making the determination and include an emissions analysis (or other information) that demonstrates the owner or operator's conclusion that the source is unaffected (*e.g.,* because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the Administrator to make an applicability finding for the source with regard to the relevant standard or other requirement. If applicable, the analysis must be performed in accordance with requirements established in relevant subparts of this part for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with EPA guidance materials published to assist sources in making applicability determinations under section 112 of the Act, if any. The requirements to determine applicability of a standard under § 63.1(b)(3) and to record the

results of that determination under this paragraph (b)(3) of this section shall not by themselves create an obligation for the owner or operator to obtain a title V permit.

(c) *Additional recordkeeping requirements for sources with continuous monitoring systems.* In addition to complying with the requirements specified in paragraphs (b)(1) and (b)(2) of this section, the owner or operator of an affected source required to install a CMS by a relevant standard shall maintain records for such source of -

(1) All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods);

(2)-(4) [Reserved]

(5) The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;

(6) The date and time identifying each period during which the CMS was out of control, as defined in § 63.8(c)(7);

(7) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source;

(8) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source;

(9) [Reserved]

(10) The nature and cause of any malfunction (if known);

(11) The corrective action taken or preventive measures adopted;

(12) The nature of the repairs or adjustments to the CMS that was inoperative or out of control;

(13) The total process operating time during the reporting period; and

(14) All procedures that are part of a quality control program developed and implemented for CMS under § 63.8(d).

(15) In order to satisfy the requirements of paragraphs (c)(10) through (c)(12) of this section and to avoid duplicative recordkeeping efforts, the owner or operator may use the affected source's startup, shutdown, and malfunction plan or records kept to satisfy the recordkeeping requirements of the startup, shutdown, and malfunction plan specified in § 63.6(e), provided that such plan and records adequately address the requirements of paragraphs (c)(10) through (c)(12).

(d) *General reporting requirements.*

(1) Notwithstanding the requirements in this paragraph or paragraph (e) of this section, and except as provided in § 63.16, the owner or operator of an affected source subject to reporting requirements under this part shall submit reports to the Administrator in accordance with the reporting requirements in the relevant standard(s).

(2) *Reporting results of performance tests.* Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of any performance test under § 63.7 to the Administrator. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of a required performance test to the appropriate permitting authority. The owner or operator of an affected source shall report the results of the performance test to the Administrator (or the State with an approved permit program) before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator. The results of the performance test shall be submitted as part of the notification of compliance status required under § 63.9(h).

(3) *Reporting results of opacity or visible emission observations.* The owner or operator of an affected source required to conduct opacity or visible emission observations by a relevant standard shall report the opacity or visible emission results (produced using Test Method 9 or Test Method 22, or an alternative to these test methods) along with the results of the performance test required under § 63.7. If no performance test is required, or if visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the performance test required under § 63.7, the owner or operator shall report the opacity or visible emission results before the close of business on the 30th day following the completion of the opacity or visible emission observations.

(4) *Progress reports.* The owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under § 63.6(i) shall submit such reports to the Administrator (or the State with an approved permit program) by the dates specified in the written extension of compliance.

(5) (i) *Periodic startup, shutdown, and malfunction reports.* If actions taken by an owner or operator during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan (see § 63.6(e)(3)), the owner or operator shall state such information in a startup, shutdown, and malfunction report. Actions taken to minimize emissions during such startups, shutdowns, and malfunctions shall be summarized in the report and may be done in checklist form; if actions taken are the same for each event, only one checklist is necessary. Such a report shall also include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. Reports shall only be required if a startup or shutdown caused the source to exceed any applicable emission limitation in the relevant emission standards, or if a malfunction occurred during the reporting period. The startup, shutdown, and malfunction report shall consist of a letter, containing the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, that shall be submitted to the Administrator semiannually (or on a more frequent basis if specified otherwise in a relevant standard or as established otherwise by the permitting authority in the source's title V permit). The startup, shutdown, and malfunction report shall be delivered or postmarked by the 30th day following the end of each calendar half (or other calendar reporting period, as appropriate). If the owner or operator is required to submit excess emissions and continuous monitoring system performance (or other periodic) reports under this part, the startup, shutdown, and malfunction reports required under this paragraph may be submitted simultaneously with the excess emissions and continuous monitoring system performance (or other) reports. If startup, shutdown, and malfunction reports are submitted with excess emissions and continuous monitoring system performance (or other periodic) reports, and the owner or operator receives approval to reduce the frequency of reporting for the latter under paragraph (e) of this section, the frequency of reporting for the startup, shutdown, and malfunction reports also may be reduced if the Administrator does not object to the intended change. The procedures to implement the allowance in the preceding sentence shall be the same as the procedures specified in paragraph (e)(3) of this section.

(ii) *Immediate startup, shutdown, and malfunction reports.* Notwithstanding the allowance to reduce the frequency of reporting for periodic startup, shutdown, and malfunction reports under paragraph (d)(5)(i) of this section, any time an action taken by an owner or operator during a startup or shutdown that caused the source to exceed any applicable emission limitation in the relevant emission standards, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan followed by a letter within 7 working days after the end of the event. The immediate report required under this paragraph (d)(5)(ii) shall consist of a telephone call (or facsimile (FAX) transmission) to the Administrator within 2 working days after commencing actions inconsistent with the plan, and it shall be followed by a letter, delivered or postmarked within 7 working days after the end of the event, that contains the name,

title, and signature of the owner or operator or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, describing all excess emissions and/or parameter monitoring exceedances which are believed to have occurred (or could have occurred in the case of malfunctions), and actions taken to minimize emissions in conformance with § 63.6(e)(1)(i). Notwithstanding the requirements of the previous sentence, after the effective date of an approved permit program in the State in which an affected source is located, the owner or operator may make alternative reporting arrangements, in advance, with the permitting authority in that State. Procedures governing the arrangement of alternative reporting requirements under this paragraph (d)(5)(ii) are specified in § 63.9(i).

(e) *Additional reporting requirements for sources with continuous monitoring systems* -

(1) *General.* When more than one CEMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CEMS.

(2) *Reporting results of continuous monitoring system performance evaluations.*

(i) The owner or operator of an affected source required to install a CMS by a relevant standard shall furnish the Administrator a copy of a written report of the results of the CMS performance evaluation, as required under § 63.8(e), simultaneously with the results of the performance test required under § 63.7, unless otherwise specified in the relevant standard.

(ii) The owner or operator of an affected source using a COMS to determine opacity compliance during any performance test required under § 63.7 and described in § 63.6(d)(6) shall furnish the Administrator two or, upon request, three copies of a written report of the results of the COMS performance evaluation conducted under § 63.8(e). The copies shall be furnished at least 15 calendar days before the performance test required under § 63.7 is conducted.

(3) *Excess emissions and continuous monitoring system performance report and summary report.*

(i) Excess emissions and parameter monitoring exceedances are defined in relevant standards. The owner or operator of an affected source required to install a CMS by a relevant standard shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to the Administrator semiannually, except when -

(A) More frequent reporting is specifically required by a relevant standard;

(B) The Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source; or

(C) [Reserved]

(D) The affected source is complying with the Performance Track Provisions of § 63.16, which allows less frequent reporting.

(ii) *Request to reduce frequency of excess emissions and continuous monitoring system performance reports.* Notwithstanding the frequency of reporting requirements specified in paragraph (e)(3)(i) of this section, an owner or operator who is required by a relevant standard to submit excess emissions and continuous monitoring system performance (and summary) reports on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(A) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected source's excess emissions and continuous monitoring system performance reports continually demonstrate that the source is in compliance with the relevant standard;

(B) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the relevant standard; and

(C) The Administrator does not object to a reduced frequency of reporting for the affected source, as provided in paragraph (e)(3)(iii) of this section.

(iii) The frequency of reporting of excess emissions and continuous monitoring system performance (and summary) reports required to comply with a relevant standard may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the 5-year recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(iv) As soon as CMS data indicate that the source is not in compliance with any emission limitation or operating parameter specified in the relevant standard, the frequency of reporting shall revert to the frequency specified in the relevant standard, and the owner or operator shall submit an excess emissions and continuous monitoring system performance (and summary) report for the noncomplying emission points at the next appropriate reporting period following the noncomplying event. After demonstrating ongoing compliance with the relevant standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard, as provided for in paragraphs (e)(3)(ii) and (e)(3)(iii) of this section.

(v) *Content and submittal dates for excess emissions and monitoring system performance reports.* All excess emissions and monitoring system performance reports and all summary reports, if required, shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. Written reports of excess emissions or exceedances of process or control system parameters shall include all the information required in paragraphs (c)(5) through (c)(13) of this section, in §§ 63.8(c)(7) and 63.8(c)(8), and in the relevant standard, and they shall contain the name, title, and signature of the responsible official who is certifying the accuracy of the report. When no excess emissions or exceedances of a parameter have occurred, or a CMS has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

(vi) *Summary report.* As required under paragraphs (e)(3)(vii) and (e)(3)(viii) of this section, one summary report shall be submitted for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). The summary report shall be entitled “Summary Report - Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance” and shall contain the following information:

(A) The company name and address of the affected source;

(B) An identification of each hazardous air pollutant monitored at the affected source;

(C) The beginning and ending dates of the reporting period;

(D) A brief description of the process units;

(E) The emission and operating parameter limitations specified in the relevant standard(s);

(F) The monitoring equipment manufacturer(s) and model number(s);

(G) The date of the latest CMS certification or audit;

(H) The total operating time of the affected source during the reporting period;

(I) An emission data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;

(J) A CMS performance summary (or similar summary if the owner or operator monitors control system parameters), including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes;

(K) A description of any changes in CMS, processes, or controls since the last reporting period;

(L) The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

(M) The date of the report.

(vii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report shall be submitted, and the full excess emissions and continuous monitoring system performance report need not be submitted unless required by the Administrator.

(viii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, both the summary report and the excess emissions and continuous monitoring system performance report shall be submitted.

(4) *Reporting continuous opacity monitoring system data produced during a performance test.* The owner or operator of an affected source required to use a COMS shall record the monitoring data produced during a performance test required under § 63.7 and shall furnish the Administrator a written report of the monitoring results. The report of COMS data shall be submitted simultaneously with the report of the performance test results required in paragraph (d)(2) of this section.

(f) *Waiver of recordkeeping or reporting requirements.*

(1) Until a waiver of a recordkeeping or reporting requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Recordkeeping or reporting requirements may be waived upon written application to the Administrator if, in the Administrator's judgment, the affected source is achieving the relevant standard(s), or the source is operating under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) If an application for a waiver of recordkeeping or reporting is made, the application shall accompany the request for an extension of compliance under § 63.6(i), any required compliance progress report or compliance status report required under this part (such as under §§ 63.6(i) and 63.9(h)) or in the source's title V permit, or an excess emissions and continuous monitoring system performance report required under paragraph (e) of this section, whichever is applicable. The application shall include whatever information the owner or operator considers useful to convince the Administrator that a waiver of recordkeeping or reporting is warranted.

(4) The Administrator will approve or deny a request for a waiver of recordkeeping or reporting requirements under this paragraph when he/she -

(i) Approves or denies an extension of compliance; or

(ii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

(iii) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) A waiver of any recordkeeping or reporting requirement granted under this paragraph may be conditioned on other recordkeeping or reporting requirements deemed necessary by the Administrator.

(6) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

§ 63.11 Control device and work practice requirements.

(a) *Applicability.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) This section contains requirements for control devices used to comply with applicable subparts of this part. The requirements are placed here for administrative convenience and apply only to facilities covered by subparts referring to this section.

(3) This section also contains requirements for an alternative work practice used to identify leaking equipment. This alternative work practice is placed here for administrative convenience and is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, appendix A-7, Method 21 monitor.

(b) *Flares.*

(1) Owners or operators using flares to comply with the provisions of this part shall monitor these control devices to assure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators using flares shall monitor these control devices.

(2) Flares shall be steam-assisted, air-assisted, or non-assisted.

(3) Flares shall be operated at all times when emissions may be vented to them.

(4) Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Test Method 22 in appendix A of part 60 of this chapter shall be used to determine the compliance of flares with the visible emission provisions of this part. The observation period is 2 hours and shall be used according to Method 22.

(5) Flares shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(6) An owner/operator has the choice of adhering to the heat content specifications in paragraph (b)(6)(ii) of this section, and the maximum tip velocity specifications in paragraph (b)(7) or (b)(8) of this section, or adhering to the requirements in paragraph (b)(6)(i) of this section.

(i) (A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume) or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity V_{max}, as determined by the following equation:

$V_{max} = (X_{H2} - K_1) * K_2$

Where:

V_{max} = Maximum permitted velocity, m/sec.

K_1 = Constant, 6.0 volume-percent hydrogen.

K_2 = Constant, 3.9(m/sec)/volume-percent hydrogen.

X_{H2} = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in § 63.14).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (b)(7)(i) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted at 7.45 M/scm (200 Btu/scf) or greater if the flares is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

Where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K = Constant =

$$1.740 \times 10^{-7} \left(\frac{1}{\text{ppmv}} \right) \left(\frac{\text{g-mole}}{\text{scm}} \right) \left(\frac{\text{MJ}}{\text{kcal}} \right)$$

where the standard temperature for (g-mole/scm) is 20 °C.

C_i = Concentration of sample component i in ppmv on a wet basis, as measured for organics by Test Method 18 and measured for hydrogen and carbon monoxide by American Society for Testing and Materials (ASTM) D1946-77 or 90 (Reapproved 1994) (incorporated by reference as specified in § 63.14).

H_i = Net heat of combustion of sample component i, kcal/g-mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in § 63.14) if published values are not available or cannot be calculated.

n = Number of sample components.

(7) (i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (b)(7)(ii) and (b)(7)(iii) of this section. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission

standard temperature and pressure), as determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60 of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, less than the velocity V_{max}, as determined by the method specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity, V_{max}, for flares complying with this paragraph shall be determined by the following equation:

$Log_{10}(V_{max}) = (H_T + 28.8)/31.7$

Where:

V_{max} = Maximum permitted velocity, m/sec.

28.8 = Constant.

31.7 = Constant.

H_T = The net heating value as determined in paragraph (b)(6) of this section.

(8) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity V_{max}. The maximum permitted velocity, V_{max}, for air-assisted flares shall be determined by the following equation:

$V_{max} = 8.71 + 0.708(H_T)$

Where:

V_{max} = Maximum permitted velocity, m/sec.

8.71 = Constant.

0.708 = Constant.

H_T = The net heating value as determined in paragraph (b)(6)(ii) of this section.

(c) *Alternative work practice for monitoring equipment for leaks.* Paragraphs (c), (d), and (e) of this section apply to all equipment for which the applicable subpart requires monitoring with a 40 CFR part 60, appendix A-7, Method 21 monitor, except for closed vent systems, equipment designated as leakless, and equipment identified in the applicable subpart as having no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, sppendix A-7, Method 21 monitor. Requirements in the existing subparts that are specific to the Method 21 instrument do not apply under this section. All other requirements in the applicable subpart that are not addressed in paragraphs (c), (d), and (e) of this section continue to apply. For example, equipment specification requirements, and non-Method 21 instrument recordkeeping and reporting requirements in the applicable subpart continue to apply. The terms defined in paragraphs (c)(1) through (5) of this section have meanings that are specific to the alternative work practice standard in paragraphs (c), (d), and (e) of this section.

(1) *Applicable subpart* means the subpart in 40 CFR parts 60, 61, 63, and 65 that requires monitoring of equipment with a 40 CFR part 60, appendix A-7, Method 21 monitor.

(2) *Equipment* means pumps, valves, pressure relief valves, compressors, open-ended lines, flanges, connectors, and other equipment covered by the applicable subpart that require monitoring with a 40 CFR part 60, appendix A-7, Method 21 monitor.

(3) *Imaging* means making visible emissions that may otherwise be invisible to the naked eye.

(4) *Optical gas imaging instrument* means an instrument that makes visible emissions that may otherwise be invisible to the naked eye.

(5) *Repair* means that equipment is adjusted, or otherwise altered, in order to eliminate a leak.

(6) *Leak* means:

(i) Any emissions imaged by the optical gas instrument;

(ii) Indications of liquids dripping;

(iii) Indications by a sensor that a seal or barrier fluid system has failed; or

(iv) Screening results using a 40 CFR part 60, appendix A-7, Method 21 monitor that exceed the leak definition in the applicable subpart to which the equipment is subject.

(d) The alternative work practice standard for monitoring equipment for leaks is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, appendix A-7, Method 21 monitor.

(1) An owner or operator of an affected source subject to 40 CFR parts 60, 61, 63, or 65 can choose to comply with the alternative work practice requirements in paragraph (e) of this section instead of using the 40 CFR part 60, appendix A-7, Method 21 monitor to identify leaking equipment. The owner or operator must document the equipment, process units, and facilities for which the alternative work practice will be used to identify leaks.

(2) Any leak detected when following the leak survey procedure in paragraph (e)(3) of this section must be identified for repair as required in the applicable subpart.

(3) If the alternative work practice is used to identify leaks, re-screening after an attempted repair of leaking equipment must be conducted using either the alternative work practice or the 40 CFR part 60, Appendix A-7, Method 21 monitor at the leak definition required in the applicable subparts to which the equipment is subject.

(4) The schedule for repair is as required in the applicable subpart.

(5) When this alternative work practice is used for detecting leaking equipment, choose one of the monitoring frequencies listed in Table 1 to subpart A of this part in lieu of the monitoring frequency specified for regulated equipment in the applicable subpart. Reduced monitoring frequencies for good performance are not applicable when using the alternative work practice.

(6) When this alternative work practice is used for detecting leaking equipment, the following are not applicable for the equipment being monitored:

(i) Skip period leak detection and repair;

(ii) Quality improvement plans; or

(iii) Complying with standards for allowable percentage of valves and pumps to leak.

(7) When the alternative work practice is used to detect leaking equipment, the regulated equipment in paragraph (d)(1)(i) of this section must also be monitored annually using a 40 CFR part 60, Appendix A-7, Method 21 monitor at the leak definition required in the applicable subpart. The owner or operator may choose the specific monitoring period (for example, first quarter) to conduct the annual monitoring. Subsequent monitoring must be conducted every 12 months from the initial period. Owners or operators must keep records of the annual Method 21 screening results, as specified in paragraph (i)(4)(vii) of this section.

(e) An owner or operator of an affected source who chooses to use the alternative work practice must comply with the requirements of paragraphs (e)(1) through (e)(5) of this section.

(1) *Instrument specifications.* The optical gas imaging instrument must comply with the requirements specified in paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) Provide the operator with an image of the potential leak points for each piece of equipment at both the detection sensitivity level and within the distance used in the daily instrument check described in paragraph (e)(2) of this section. The detection sensitivity level depends upon the frequency at which leak monitoring is to be performed.

(ii) Provide a date and time stamp for video records of every monitoring event.

(2) *Daily instrument check.* On a daily basis, and prior to beginning any leak monitoring work, test the optical gas imaging instrument at the mass flow rate determined in paragraph (e)(2)(i) of this section in accordance with the procedure specified in paragraphs (e)(2)(ii) through (e)(2)(iv) of this section for each camera configuration used during monitoring (for example, different lenses used), unless an alternative method to demonstrate daily instrument checks has been approved in accordance with paragraph (e)(2)(v) of this section.

(i) Calculate the mass flow rate to be used in the daily instrument check by following the procedures in paragraphs (e)(2)(i)(A) and (e)(2)(i)(B) of this section.

(A) For a specified population of equipment to be imaged by the instrument, determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, within the distance to be used in paragraph (e)(2)(iv)(B) of this section, at or below the standard detection sensitivity level.

(B) Multiply the standard detection sensitivity level, corresponding to the selected monitoring frequency in Table 1 of subpart A of this part, by the mass fraction of detectable chemicals from the stream identified in paragraph (e)(2)(i)(A) of this section to determine the mass flow rate to be used in the daily instrument check, using the following equation.

$$E_{dic} = (E_{sds}) \sum_{i=1}^{k} x_i$$

Where:

E_{dic} = Mass flow rate for the daily instrument check, grams per hour

x_i = Mass fraction of detectable chemical(s) i seen by the optical gas imaging instrument, within the distance to be used in paragraph (e)(2)(iv)(B) of this section, at or below the standard detection sensitivity level, E_{sds}.

E_{sds} = Standard detection sensitivity level from Table 1 to subpart A, grams per hour

k = Total number of detectable chemicals emitted from the leaking equipment and seen by the optical gas imaging instrument.

(ii) Start the optical gas imaging instrument according to the manufacturer's instructions, ensuring that all appropriate settings conform to the manufacturer's instructions.

(iii) Use any gas chosen by the user that can be viewed by the optical gas imaging instrument and that has a purity of no less than 98 percent.

(iv) Establish a mass flow rate by using the following procedures:

(A) Provide a source of gas where it will be in the field of view of the optical gas imaging instrument.

(B) Set up the optical gas imaging instrument at a recorded distance from the outlet or leak orifice of the flow meter that will not be exceeded in the actual performance of the leak survey. Do not exceed the operating parameters of the flow meter.

(C) Open the valve on the flow meter to set a flow rate that will create a mass emission rate equal to the mass rate calculated in paragraph (e)(2)(i) of this section while observing the gas flow through the optical gas imaging instrument viewfinder. When an image of the gas emission is seen through the viewfinder at the required emission rate, make a record of the reading on the flow meter.

(v) Repeat the procedures specified in paragraphs (e)(2)(ii) through (e)(2)(iv) of this section for each configuration of the optical gas imaging instrument used during the leak survey.

(vi) To use an alternative method to demonstrate daily instrument checks, apply to the Administrator for approval of the alternative under § 63.177 or § 63.178, whichever is applicable.

(3) *Leak survey procedure.* Operate the optical gas imaging instrument to image every regulated piece of equipment selected for this work practice in accordance with the instrument manufacturer's operating parameters. All emissions imaged by the optical gas imaging instrument are considered to be leaks and are subject to repair. All emissions visible to the naked eye are also considered to be leaks and are subject to repair.

(4) *Recordkeeping.* Keep the records described in paragraphs (e)(4)(i) through (e)(4)(vii) of this section:

(i) The equipment, processes, and facilities for which the owner or operator chooses to use the alternative work practice.

(ii) The detection sensitivity level selected from Table 1 to subpart A of this part for the optical gas imaging instrument.

(iii) The analysis to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, as specified in paragraph (e)(2)(i)(A) of this section.

(iv) The technical basis for the mass fraction of detectable chemicals used in the equation in paragraph (e)(2)(i)(B) of this section.

(v) The daily instrument check. Record the distance, per paragraph (e)(2)(iv)(B) of this section, and the flow meter reading, per paragraph (e)(2)(iv)(C) of this section, at which the leak was imaged. Keep a video record of the daily instrument check for each configuration of the optical gas imaging instrument used during the leak survey (for example, the daily instrument check must be conducted for each lens used). The video record must include a time and date stamp for each daily instrument check. The video record must be kept for 5 years.

(vi) *Recordkeeping requirements in the applicable subpart.* A video record must be used to document the leak survey results. The video record must include a time and date stamp for each monitoring event. A video record can be used to meet the recordkeeping requirements of the applicable subparts if each piece of regulated equipment selected for this work practice can be identified in the video record. The video record must be kept for 5 years.

(vii) The results of the annual Method 21 screening required in paragraph (h)(7) of this section. Records must be kept for all regulated equipment specified in paragraph (h)(1) of this section. Records must identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in the existing applicable subparts.

(5) *Reporting.* Submit the reports required in the applicable subpart. Submit the records of the annual Method 21 screening required in paragraph (h)(7) of this section to the Administrator via e-mail to *CCG-AWP@EPA.GOV.*

§ 63.12 State authority and delegations.

(a) The provisions of this part shall not be construed in any manner to preclude any State or political subdivision thereof from -

(1) Adopting and enforcing any standard, limitation, prohibition, or other regulation applicable to an affected source subject to the requirements of this part, provided that such standard, limitation, prohibition, or regulation is not less stringent than any requirement applicable to such source established under this part;

(2) Requiring the owner or operator of an affected source to obtain permits, licenses, or approvals prior to initiating construction, reconstruction, modification, or operation of such source; or

(3) Requiring emission reductions in excess of those specified in subpart D of this part as a condition for granting the extension of compliance authorized by section 112(i)(5) of the Act.

(b) (1) Section 112(l) of the Act directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards and other requirements pursuant to section 112 for stationary sources located in that State. Because of the unique nature of radioactive material, delegation of authority to implement and enforce standards that control radionuclides may require separate approval.

(2) Subpart E of this part establishes procedures consistent with section 112(l) for the approval of State rules or programs to implement and enforce applicable Federal rules promulgated under the authority of section 112. Subpart E also establishes procedures for the review and withdrawal of section 112 implementation and enforcement authorities granted through a section 112(l) approval.

(c) All information required to be submitted to the EPA under this part also shall be submitted to the appropriate state agency of any state to which authority has been delegated under section 112(l) of the Act, provided that each specific delegation may exempt sources from a certain federal or state reporting requirement. Any information required to be submitted electronically by this part via the EPA's CEDRI may, at the discretion of the delegated authority, satisfy the requirements of this paragraph. The Administrator may permit all or some of the information to be submitted to the appropriate state agency only, instead of to the EPA and the state agency with the exception of federal electronic reporting requirements under this part. Sources may not be exempted from federal electronic reporting requirements.

§ 63.13 Addresses of State air pollution control agencies and EPA Regional Offices.

(a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted to the appropriate Regional Office of the U.S. Environmental Protection Agency indicated in the following list of EPA Regional offices. If a request, report, application, submittal, or other communication is required by this part to be submitted electronically via the EPA's CEDRI then such submission satisfies the requirements of this paragraph (a).

EPA Region I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont) Director, Enforcement and Compliance Assurance Division, U.S. EPA Region I, 5 Post Office Square - Suite 100 (04-2), Boston, MA 02109-3912, Attn: Air Compliance Clerk.

EPA Region II (New Jersey, New York, Puerto Rico, Virgin Islands), Director, Air and Waste Management Division, 26 Federal Plaza, New York, NY 10278.

EPA Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia), Director, Air Protection Division, 1650 Arch Street, Philadelphia, PA 19103.

EPA Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee). Director, Air, Pesticides and Toxics Management Division, Atlanta Federal Center, 61 Forsyth Street, Atlanta, GA 30303-3104.

EPA Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin), Director, Air and Radiation Division, 77 West Jackson Blvd., Chicago, IL 60604-3507.

EPA Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, Texas); Director; Enforcement and Compliance Assurance Division; U.S. Environmental Protection Agency, 1201 Elm Street, Suite 500, Mail Code 6ECD, Dallas, Texas 75270-2102.

EPA Region VII (Iowa, Kansas, Missouri, Nebraska), Director, Air and Waste Management Division, 11201 Renner Boulevard, Lenexa, Kansas 66219.

EPA Region VIII (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming) Director, Air and Toxics Technical Enforcement Program, Office of Enforcement, Compliance and Environmental Justice, Mail Code 8ENF-AT, 1595 Wynkoop Street, Denver, CO 80202-1129.

EPA Region IX (Arizona, California, Hawaii, Nevada; the territories of American Samoa and Guam; the Commonwealth of the Northern Mariana Islands; the territories of Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Atoll, Palmyra Atoll, and Wake Islands; and certain U.S. Government activities in the freely associated states of the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau), Director, Air Division, 75 Hawthorne Street, San Francisco, CA 94105.

EPA Region X (Alaska, Idaho, Oregon, Washington), Director, Office of Air Quality, 1200 Sixth Avenue (OAQ-107), Seattle, WA 98101.

(b) All information required to be submitted to the Administrator under this part also shall be submitted to the appropriate State agency of any State to which authority has been delegated under section 112(l) of the Act. The owner or operator of an affected source may contact the appropriate EPA Regional Office for the mailing addresses for those States whose delegation requests have been approved.

(c) If any State requires a submittal that contains all the information required in an application, notification, request, report, statement, or other communication required in this part, an owner or operator may send the appropriate Regional Office of the EPA a copy of that submittal to satisfy the requirements of this part for that communication.

§ 63.14 Incorporations by reference.

(a) The materials listed in this section are incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, a document must be published in the Federal Register and the material must be available to the public. All approved materials are available for inspection at the Air and Radiation Docket and Information Center (Air Docket) in the EPA Docket Center (EPA/DC) at Rm. 3334, EPA West Bldg., 1301 Constitution Ave. NW, Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number of the EPA/DC Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742. These approved materials are also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov or go to www.archives.gov/federal-register/cfr/ibr-locations.html. In addition, these materials are available from the following sources:

(b) American Conference of Governmental Industrial Hygienists (ACGIH), Customer Service Department, 1330 Kemper Meadow Drive, Cincinnati, Ohio 45240, telephone number (513) 742–2020.

(1) Industrial Ventilation: A Manual of Recommended Practice, 22nd Edition, 1995, Chapter 3, “Local Exhaust Hoods” and Chapter 5, “Exhaust System Design Procedure.” IBR approved for §§ 63.843(b) and 63.844(b).

(2) Industrial Ventilation: A Manual of Recommended Practice, 23rd Edition, 1998, Chapter 3, “Local Exhaust Hoods” and Chapter 5, “Exhaust System Design Procedure.” IBR approved for §§ 63.1503, 63.1506(c), 63.1512(e), Table 2 to subpart RRR, Table 3 to subpart RRR, and appendix A to subpart RRR, and § 63.2984(e).

(3) Industrial Ventilation: A Manual of Recommended Practice for Design, 27th Edition, 2010. IBR approved for §§ 63.1503, 63.1506(c), 63.1512(e), Table 2 to subpart RRR, Table 3 to subpart RRR, and appendix A to subpart RRR, and § 63.2984(e).

(c) American Petroleum Institute (API), 1220 L Street NW., Washington, DC 20005.

(1) API Publication 2517, Evaporative Loss from External Floating-Roof Tanks, Third Edition, February 1989, IBR approved for §§ 63.111, 63.1402, 63.2406 and 63.7944.

Note 1 to paragraph (c)(1):

API Publication 2517 available through reseller HIS Markit at https://global.ihs.com/

(2) API Publication 2518, Evaporative Loss from Fixed-roof Tanks, Second Edition, October 1991, IBR approved for § 63.150(g).

(3) API Manual of Petroleum Measurement Specifications (MPMS) Chapter 19.2 (API MPMS 19.2), Evaporative Loss From Floating-Roof Tanks, First Edition, April 1997, IBR approved for §§ 63.1251 and 63.12005.

(d) American Public Health Association, 1015 18th Street NW, Washington, DC 20036; phone (844) 232–3707; email: standardmethods@subscritpionoffice.com; website: www.standardmethods.org.

(1) Standard Method 5210, Biochemical Oxygen Demand (BOD), revised December 10, 2019; IBR approved for § 63.457(c)

(2) [Reserved]

(e) American Society of Heating, Refrigerating, and Air-Conditioning Engineers at 1791 Tullie Circle, NE., Atlanta, GA 30329 orders@ashrae.org.

(1) American Society of Heating, Refrigerating, and Air-Conditioning Engineers Method 52.1, *Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter* June 4, 1992; IBR approved for § 63.11516(d).

(2) ANSI/ASHRAE Standard 52.2–2017, *Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size,* copyright 2017; IBR approved for § 63.11173(e).

(f) American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016–5990, Telephone (800) 843–2763, http://www.asme.org; also available from HIS, Incorporated, 15 Inverness Way East, Englewood, CO 80112, Telephone (877) 413–5184, http://global.ihs.com.

(1) ANSI/ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], issued August 31, 1981, IBR approved for §§ 63.309(k), 63.457(k), 63.772(e) and (h), 63.865(b), 63.997(e), 63.1282(d) and (g), and 63.1625(b), table 5 to subpart EEEE, §§ 63.3166(a), 63.3360(e), 63.3545(a), 63.3555(a), 63.4166(a), 63.4362(a), 63.4766(a), 63.4965(a), and 63.5160(d), table 4 to subpart UUUU, table 3 to subpart YYYY, §§ 63.7822(b), 63.7824(e), 63.7825(b), 63.8000(d), 63.9307(c), 63.9323(a), 63.9621(b) and (c), 63.11148(e), 63.11155(e), 63.11162(f), 63.11163(g), 63.11410(j), 63.11551(a), 63.11646(a), and 63.11945, and table 4 to subpart AAAAA, table 5 to subpart DDDDD, table 4 to subpart JJJJJ, table 4 to subpart KKKKK, table 4 to subpart SSSSS, tables 4 and 5 of subpart UUUUU, table 1 to subpart ZZZZZ, and table 4 to subpart JJJJJJ.

(2) [Reserved]

(g) The Association of Florida Phosphate Chemists, P.O. Box 1645, Bartow, Florida 33830.

(1) Book of Methods Used and Adopted By The Association of Florida Phosphate Chemists, Seventh Edition 1991:

(i) Section IX, Methods of Analysis for Phosphate Rock, No. 1 Preparation of Sample, IBR approved for § 63.606(f), § 63.626(f).

(ii) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus-P2O5 or Ca3(PO4)2, Method A—Volumetric Method, IBR approved for § 63.606(f), § 63.626(f).

(iii) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus-P2O5 or Ca3(PO4)2, Method B—Gravimetric Quimociac Method, IBR approved for § 63.606(f), § 63.626(f).

(iv) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus-P2O5 or Ca3(PO4)2, Method C—Spectrophotometric Method, IBR approved for § 63.606(f), § 63.626(f).

(v) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P2O5, Method A—Volumetric Method, IBR approved for § 63.606(f), § 63.626(f), and (g).

(vi) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P2O5, Method B—Gravimetric Quimociac Method, IBR approved for § 63.606(f), § 63.626(f), and (g).

(vii) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P2O5, Method C—Spectrophotometric Method, IBR approved for § 63.606(f), § 63.626(f), and (g).

(2) [Reserved]

(h) Association of Official Analytical Chemists (AOAC) International, Customer Services, Suite 400, 2200 Wilson Boulevard, Arlington, Virginia 22201–3301, Telephone (703) 522–3032, Fax (703) 522–5468.

(1) AOAC Official Method 929.01 Sampling of Solid Fertilizers, Sixteenth edition, 1995, IBR approved for § 63.626(g).

(2) AOAC Official Method 929.02 Preparation of Fertilizer Sample, Sixteenth edition, 1995, IBR approved for § 63.626(g).

(3) AOAC Official Method 957.02 Phosphorus (Total) in Fertilizers, Preparation of Sample Solution, Sixteenth edition, 1995, IBR approved for § 63.626(g).

(4) AOAC Official Method 958.01 Phosphorus (Total) in Fertilizers, Spectrophotometric Molybdovanadophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(g).

(5) AOAC Official Method 962.02 Phosphorus (Total) in Fertilizers, Gravimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(g).

(6) AOAC Official Method 969.02 Phosphorus (Total) in Fertilizers, Alkalimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(g).

(7) AOAC Official Method 978.01 Phosphorus (Total) in Fertilizers, Automated Method, Sixteenth edition, 1995, IBR approved for § 63.626(g).

(i) ASTM International, 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428–2959, Telephone (610) 832–9585, http://www.astm.org*;* also available from ProQuest, 789 East Eisenhower Parkway, Ann Arbor, MI 48106–1346, Telephone (734) 761–4700, http://www.proquest.com*.*

(1) ASTM D95–05 (Reapproved 2010), Standard Test Method for Water in Petroleum Products and Bituminous Materials by Distillation, approved May 1, 2010, IBR approved for § 63.10005(i) and table 6 to subpart DDDDD.

(2) ASTM D240–09 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, approved July 1, 2009, IBR approved for table 6 to subpart DDDDD.

(3) ASTM Method D388–05, Standard Classification of Coals by Rank, approved September 15, 2005, IBR approved for §§ 63.7575, 63.10042, and 63.11237.

(4) ASTM Method D396–10, Standard Specification for Fuel Oils, including Appendix X1, approved October 1, 2010, IBR approved for § 63.10042.

(5) ASTM D396–10, Standard Specification for Fuel Oils, approved October 1, 2010, IBR approved for §§ 63.7575 and 63.11237.

(6) ASTM D523–89, Standard Test Method for Specular Gloss, IBR approved for § 63.782.

(7) ASTM D975–11b, Standard Specification for Diesel Fuel Oils, approved December 1, 2011, IBR approved for § 63.7575.

(8) ASTM D1193–77, Standard Specification for Reagent Water, IBR approved for appendix A to part 63: Method 306, Sections 7.1.1 and 7.4.2.

(9) ASTM D1193–91, Standard Specification for Reagent Water, IBR approved for appendix A to part 63: Method 306, Sections 7.1.1 and 7.4.2.

(10) ASTM D1331–89, Standard Test Methods for Surface and Interfacial Tension of Solutions of Surface Active Agents, IBR approved for appendix A to part 63: Method 306B, Sections 6.2, 11.1, and 12.2.2.

(11) ASTM D1475–90, Standard Test Method for Density of Paint, Varnish Lacquer, and Related Products, IBR approved for appendix A to subpart II.

(12) ASTM D1475–13, Standard Test Method for Density of Liquid Coatings, Inks, and Related Products, approved November 1, 2013, IBR approved for §§ 63.3151(b), 63.3941(b) and (c), 63.3951(c), 63.4141(b) and (c), 63.4551(c), 63.4741(b) and (c), 63.4751(c), and 63.4941(b) and (c).

(13) ASTM Method D1835–05, Standard Specification for Liquefied Petroleum (LP) Gases, approved April 1, 2005, IBR approved for §§ 63.7575 and 63.11237.

(14) ASTM D1945–03 (Reapproved 2010), Standard Test Method for Analysis of Natural Gas by Gas Chromatography, Approved January 1, 2010, IBR approved for §§ 63.670(j), 63.772(h), and 63.1282(g).

(15) ASTM D1945–14, Standard Test Method for Analysis of Natural Gas by Gas Chromatography, Approved November 1, 2014, IBR approved for § 63.670(j).

(16) ASTM D1946–77, Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for § 63.11(b).

(17) ASTM D1946–90 (Reapproved 1994), Standard Method for Analysis of Reformed Gas by Gas Chromatography, 1994, IBR approved for §§ 63.11(b), 63.987(b), and 63.1412.

(18) ASTM D1963–85 (Reapproved 1996), Standard Test Method for Specific Gravity of Drying Oils, Varnishes, Resins, and Related Materials at 25/25 °C, approved November 29, 1985, IBR approved for § 63.3360(c).

(19) ASTM D2013/D2013M–09, Standard Practice for Preparing Coal Samples for Analysis, (Approved November 1, 2009), IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(20) ASTM D2099–00, Standard Test Method for Dynamic Water Resistance of Shoe Upper Leather by the Maeser Water Penetration Tester, IBR approved for § 63.5350.

(21) ASTM D2111–10 (Reapproved 2015), Standard Test Methods for Specific Gravity and Density of Halogenated Organic Solvents and Their Admixtures, approved June 1, 2015, IBR approved for §§ 63.3360(c), 63.3951(c), 63.4141(b) and (c), 63.4551(c), and 63.4741(a).

(22) ASTM D2216–05, Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass, IBR approved for the definition of “Free organic liquids” in § 63.10692.

(23) ASTM D2234/D2234M–10, Standard Practice for Collection of a Gross Sample of Coal, approved January 1, 2010, IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(24) ASTM D2369–93, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A to subpart II.

(25) ASTM D2369–95, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A to subpart II.

(26) ASTM D2369–10 (Reapproved 2015)e1, Standard Test Method for Volatile Content of Coatings, approved June 1, 2015, IBR approved for §§ 63.3151(a), 63.3360(c), 63.3961(j), 63.4141(a) and (b), 63.4161(h), 63.4321(e), 63.4341(e), 63.4351(d), 63.4541(a), and 63.4561(j), appendix A to subpart PPPP, and §§ 63.4741(a), 63.4941(a) and (b), 63.4961(j), and 63.8055(b).

(27) ASTM D2382–76, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for § 63.11(b).

(28) ASTM D2382–88, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for § 63.11(b).

(29) ASTM D2697–86 (Reapproved 1998), Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings, IBR approved for §§ 63.3521(b), and 63.5160(c).

(30) ASTM D2697–03 (Reapproved 2014), Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings, approved July 1, 2014, IBR approved for §§ 63.3161(f), 63.3360(c), 63.3941(b), 63.4141(b), 63.4741(a) and (b), 63.4941(b), and 63.8055(b).

(31) ASTM D2879–83, Standard Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, Approved November 28, 1983, IBR approved for §§ 63.111, 63.1402, 63.2406, 63.7944, and 63.12005.

(32) ASTM D2879–96, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, (Approved 1996), IBR approved for §§ 63.111, and 63.12005.

(33) ASTM D2908–74, Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography, Approved June 27, 1974, IBR approved for § 63.1329(c).

(34) ASTM D2908–91, Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography, Approved December 15, 1991, IBR approved for § 63.1329(c).

(35) ASTM D2908–91(Reapproved 2001), Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography, Approved December 15, 1991, IBR approved for § 63.1329(c).

(36) ASTM D2908–91(Reapproved 2005), Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography, Approved December 1, 2005, IBR approved for § 63.1329(c).

(37) ASTM D2908–91(Reapproved 2011), Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography, Approved May 1, 2011, IBR approved for § 63.1329(c).

(38) ASTM D2986–95A, "Standard Practice for Evaluation of Air Assay Media by the Monodisperse DOP (Dioctyl Phthalate) Smoke Test," approved September 10, 1995, IBR approved for section 7.1.1 of Method 315 in appendix A to this part.

(39) ASTM D3173–03 (Reapproved 2008), Standard Test Method for Moisture in the Analysis Sample of Coal and Coke, (Approved February 1, 2008), IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(40) ASTM D3257–93, Standard Test Methods for Aromatics in Mineral Spirits by Gas Chromatography, IBR approved for § 63.786(b).

(41) ASTM D3370–76, Standard Practices for Sampling Water, Approved August 27, 1976, IBR approved for § 63.1329(c).

(42) ASTM D3370–95a, Standard Practices for Sampling Water from Closed Conduits, Approved September 10, 1995, IBR approved for § 63.1329(c).

(43) ASTM D3370–07, Standard Practices for Sampling Water from Closed Conduits, Approved December 1, 2007, IBR approved for § 63.1329(c).

(44) ASTM D3370–08, Standard Practices for Sampling Water from Closed Conduits, Approved October 1, 2008, IBR approved for § 63.1329(c).

(45) ASTM D3370–10, Standard Practices for Sampling Water from Closed Conduits, Approved December 1, 2010, IBR approved for § 63.1329(c).

(46) ASTM D3588–98 (Reapproved 2003), Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density of Gaseous Fuels, (Approved May 10, 2003), IBR approved for §§ 63.772(h) and 63.1282(g).

(47) ASTM D3695–88, Standard Test Method for Volatile Alcohols in Water by Direct Aqueous-Injection Gas Chromatography, IBR approved for § 63.365(e).

(48) ASTM D3792–91, Standard Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, IBR approved for appendix A to subpart II.

(49) ASTM D3912–80, Standard Test Method for Chemical Resistance of Coatings Used in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(50) ASTM D3960–98, Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings, approved November 10, 1998, IBR approved for §§ 63.3360(c) and 63.8055(b).

(51) ASTM D4006–11, Standard Test Method for Water in Crude Oil by Distillation, including Annex A1 and Appendix X1, (Approved June 1, 2011), IBR approved for § 63.10005(i) and table 6 to subpart DDDDD.

(52) ASTM D4017–81, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for appendix A to subpart II.

(53) ASTM D4017–90, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for appendix A to subpart II.

(54) ASTM D4017–96a, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for appendix A to subpart II.

(55) ASTM D4057–06 (Reapproved 2011), Standard Practice for Manual Sampling of Petroleum and Petroleum Products, including Annex A1, (Approved June 1, 2011), IBR approved for § 63.10005(i) and table 6 to subpart DDDDD.

(56) ASTM D4082–89, Standard Test Method for Effects of Gamma Radiation on Coatings for Use in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(57) ASTM D4084–07, Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method), (Approved June 1, 2007), IBR approved for table 6 to subpart DDDDD.

(58) ASTM D4177–95 (Reapproved 2010), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, including Annexes A1 through A6 and Appendices X1 and X2, (Approved May 1, 2010), IBR approved for § 63.10005(i) and table 6 to subpart DDDDD.

(59) ASTM D4208–02 (Reapproved 2007), Standard Test Method for Total Chlorine in Coal by the Oxygen Bomb Combustion/Ion Selective Electrode Method, approved May 1, 2007, IBR approved for table 6 to subpart DDDDD.

(60) ASTM D4239–14e1, "Standard Test Method for Sulfur in the Analysis Sample of Coal and Coke Using High-Temperature Tube Furnace Combustion," approved March 1, 2014, IBR approved for § 63.849(f).

(61) ASTM D4256–89, Standard Test Method for Determination of the Decontaminability of Coatings Used in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(62) ASTM D4256–89 (Reapproved 94), Standard Test Method for Determination of the Decontaminability of Coatings Used in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(63) ASTM D4282–15, Standard Test Method for Determination of Free Cyanide in Water and Wastewater by Microdiffusion, Approved July 15, 2015, IBR approved for § 63.1103(g).

(64) ASTM D4606–03 (Reapproved 2007), Standard Test Method for Determination of Arsenic and Selenium in Coal by the Hydride Generation/Atomic Absorption Method, (Approved October 1, 2007), IBR approved for table 6 to subpart DDDDD.

(65) ASTM D4809–95, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), IBR approved for § 63.11(b).

(66) ASTM D4840–99 (Reapproved 2018)e, Standard Guide for Sampling Chain-of-Custody Procedures, approved August 15, 2018, IBR approved for appendix A to part 63.

(67) ASTM D4891–89 (Reapproved 2006), Standard Test Method for Heating Value of Gases in Natural Gas Range by Stoichiometric Combustion, (Approved June 1, 2006), IBR approved for §§ 63.772(h) and 63.1282(g).

(68) ASTM D5066–91 (Reapproved 2017), Standard Test Method for Determination of the Transfer Efficiency Under Production Conditions for Spray Application of Automotive Paints-Weight Basis, approved June 1, 2017, IBR approved for § 63.3161(g).

(69) ASTM D5087–02, Standard Test Method for Determining Amount of Volatile Organic Compound (VOC) Released from Solventborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement), IBR approved for § 63.3165(e) and appendix A to subpart IIII.

(70) ASTM D5192–09, Standard Practice for Collection of Coal Samples from Core, (Approved June 1, 2009), IBR approved for table 6 to subpart DDDDD.

(71) ASTM D5198–09, Standard Practice for Nitric Acid Digestion of Solid Waste, (Approved February 1, 2009), IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(72) ASTM D5228–92, Standard Test Method for Determination of Butane Working Capacity of Activated Carbon, (Reapproved 2005), IBR approved for § 63.11092(b).

(73) ASTM D5291–02, Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants, IBR approved for appendix A to subpart MMMM.

(74) ASTM D5790–95 (Reapproved 2012), Standard Test Method for Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry, Approved June 15, 2012, IBR approved for § 63.2485(h) and Table 4 to subpart UUUU.

(75) ASTM D5864–11, Standard Test Method for Determining Aerobic Aquatic Biodegradation of Lubricants or Their Components, (Approved March 1, 2011), IBR approved for table 6 to subpart DDDDD.

(76) ASTM D5865–10a, Standard Test Method for Gross Calorific Value of Coal and Coke, (Approved May 1, 2010), IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(77) ASTM D5954–98 (Reapproved 2006), Test Method for Mercury Sampling and Measurement in Natural Gas by Atomic Absorption Spectroscopy, (Approved December 1, 2006), IBR approved for table 6 to subpart DDDDD.

(78) ASTM D5965–02 (Reapproved 2013), Standard Test Methods for Specific Gravity of Coating Powders, approved June 1, 2013, IBR approved for §§ 63.3151(b) and 63.3951(c).

(79) ASTM D6053–00, Standard Test Method for Determination of Volatile Organic Compound (VOC) Content of Electrical Insulating Varnishes, IBR approved for appendix A to subpart MMMM.

(80) ASTM D6093–97 (Reapproved 2003), Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer, IBR approved for §§ 63.3521 and 63.5160(c).

(81) ASTM D6093–97 (Reapproved 2016), Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer, approved December 1, 2016, IBR approved for §§ 63.3161(f), 63.3360(c), 63.3941(b), 63.4141(b), 63.4741(a) and (b), and 63.4941(b).

(82) ASTM D6196–03 (Reapproved 2009), Standard Practice for Selection of Sorbents, Sampling, and Thermal Desorption Analysis Procedures for Volatile Organic Compounds in Air, Approved March 1, 2009, IBR approved for appendix A to this part: Method 325A and Method 325B.

(83) ASTM D6266–00a (Reapproved 2017), Standard Test Method for Determining the Amount of Volatile Organic Compound (VOC) Released from Waterborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement), approved July 1, 2017, IBR approved for § 63.3165(e).

(84) ASTM D6323–98 (Reapproved 2003), Standard Guide for Laboratory Subsampling of Media Related to Waste Management Activities, (Approved August 10, 2003), IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(85) ASTM D6348–03, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, including Annexes A1 through A8, Approved October 1, 2003, IBR approved for §§ 63.457(b), 63.997(e), and 63.1349, table 4 to subpart DDDD, table 5 to subpart EEEE, table 4 to subpart UUUU, table 4 subpart ZZZZ, and table 8 to subpart HHHHHHH.

(86) ASTM D6348–03 (Reapproved 2010), Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, including Annexes A1 through A8, Approved October 1, 2010, IBR approved for §§ 63.1571(a), 63.4751(i), 63.4752(e), 63.4766(b), 63.7142(a) and (b), tables 4 and 5 to subpart JJJJJ, tables 4 and 6 to subpart KKKKK, tables 1, 2, and 5 to subpart UUUUU and appendix B to subpart UUUUU.

(87) ASTM D6348–12e1, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, Approved February 1, 2012, IBR approved for §§ 63.997(e), 63.1571(a), and 63.2354(b), table 5 to subpart EEEE, table 4 to subpart UUUU, §§ 63.7142(a) and (b) and 63.8000(d), and table 4 to subpart SSSSS.

(88) ASTM D6350–98 (Reapproved 2003), Standard Test Method for Mercury Sampling and Analysis in Natural Gas by Atomic Fluorescence Spectroscopy, (Approved May 10, 2003), IBR approved for table 6 to subpart DDDDD.

(89) ASTM D6357–11, Test Methods for Determination of Trace Elements in Coal, Coke, and Combustion Residues from Coal Utilization Processes by Inductively Coupled Plasma Atomic Emission Spectrometry, (Approved April 1, 2011), IBR approved for table 6 to subpart DDDDD.

(90) ASTM D6376–10, "Standard Test Method for Determination of Trace Metals in Petroleum Coke by Wavelength Dispersive X-Ray Fluorescence Spectroscopy," Approved July 1, 2010, IBR approved for § 63.849(f).

(91) [Reserved]

(92) ASTM D6420–99, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, IBR approved for §§ 63.5799 and 63.5850.

(93) ASTM D6420–99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (Approved October 1, 2004), IBR approved for §§ 63.457(b), 63.772(a), 63.772(e), 63.1282(a) and (d), and table 8 to subpart HHHHHHH.

(94) ASTM D6420–99 (Reapproved 2010), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, Approved October 1, 2010, IBR approved for §§ 63.670(j), Table 4 to subpart UUUU, 63.7142(b), and appendix A to this part: Method 325B.

(95) ASTM D6420–18, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, approved November 1, 2018, IBR approved for §§ 63.987(b), 63.997(e), and 63.2354(b), table 5 to subpart EEEE, and §§ 63.2450(j) and 63.8000(d).

(96) ASTM D6522–00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, IBR approved for § 63.9307(c).

(97) ASTM D6522–00 (Reapproved 2005), Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, (Approved October 1, 2005), IBR approved for table 4 to subpart ZZZZ, table 5 to subpart DDDDDD, table 4 to subpart JJJJJJ, and §§ 63.772(e) and (h)) and 63.1282(d) and (g).

(98) ASTM D6522–11 Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, Approved December 1, 2011, IBR approved for § 63.1961(a) and table 3 to subpart YYYY.

(99) ASTM D6721–01 (Reapproved 2006), Standard Test Method for Determination of Chlorine in Coal by Oxidative Hydrolysis Microcoulometry, (Approved April 1, 2006), IBR approved for table 6 to subpart DDDDD.

(100) ASTM D6722–01 (Reapproved 2006), Standard Test Method for Total Mercury in Coal and Coal Combustion Residues by the Direct Combustion Analysis, (Approved April 1, 2006), IBR approved for Table 6 to subpart DDDDD and Table 5 to subpart JJJJJJ.

(101) ASTM D6735–01 (Reapproved 2009), Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method, IBR approved for § 63.7142(b), tables 4 and 5 to subpart JJJJJ, and tables 4 and 6 to subpart KKKKK.

(102) ASTM D6751–11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels, (Approved July 15, 2011), IBR approved for §§ 63.7575 and 63.11237.

(103) ASTM D6784–02 (Reapproved 2008), Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), Approved April 1, 2008; IBR approved for §§ 63.2465(d); 63.11646(a); 63.11647(a) and (d); tables 1, 2, 5, 11, 12t, and 13 to subpart DDDDD; tables 4 and 5 to subpart JJJJJ; tables 4 and 6 to subpart KKKKK; table 4 to subpart JJJJJJ.

(104) ASTM D6784–16, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), Approved March 1, 2016; IBR approved for table 5 to subpart UUUUU; appendix A to subpart UUUUU.

(105) ASTM D6883–04, Standard Practice for Manual Sampling of Stationary Coal from Railroad Cars, Barges, Trucks, or Stockpiles, (Approved June 1, 2004), IBR approved for table 6 to subpart DDDDD.

(106) ASTM D6886–18, Standard Test Method for Determination of the Weight Percent Individual Volatile Organic Compounds in Waterborne Air-Dry Coatings by Gas Chromatography, approved October 1, 2018, IBR approved for § 63.2354(c).

(107) ASTM D7237–18, Standard Test Method for Free Cyanide and Aquatic Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection, Approved December 1, 2018, IBR approved for § 63.1103(g).

(108) ASTM D7430–11ae1, Standard Practice for Mechanical Sampling of Coal, (Approved October 1, 2011), IBR approved for table 6 to subpart DDDDD.

(109) ASTM D7520–16, Standard Test Method for Determining the Opacity of a Plume in the Outdoor Ambient Atmosphere, approved April 1, 2016; IBR approved for §§ 63.1625(b); table 3 to subpart LLLLL; 63.7823(c) through (e), 63.7833(g); 63.11423(c).

(110) [Reserved]

(111) ASTM E145–94 (Reapproved 2001), Standard Specification for Gravity-Convection and Forced-Ventilation Ovens, IBR approved for appendix A to subpart PPPP.

(112) ASTM E180–93, Standard Practice for Determining the Precision of ASTM Methods for Analysis and Testing of Industrial Chemicals, IBR approved for § 63.786(b).

(113) ASTM E260–91, General Practice for Packed Column Gas Chromatography, IBR approved for §§ 63.750(b) and 63.786(b).

(114) ASTM E260–96, General Practice for Packed Column Gas Chromatography, IBR approved for §§ 63.750(b) and 63.786(b).

(115) ASTM E515–95 (Reapproved 2000), Standard Test Method for Leaks Using Bubble Emission Techniques, IBR approved for § 63.425(i).

(116) ASTM E711–87 (Reapproved 2004), Standard Test Method for Gross Calorific Value of Refuse-Derived Fuel by the Bomb Calorimeter, (Approved August 28, 1987), IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(117) ASTM E776–87 (Reapproved 2009), Standard Test Method for Forms of Chlorine in Refuse-Derived Fuel, (Approved July 1, 2009), IBR approved for table 6 to subpart DDDDD.

(118) ASTM E871–82 (Reapproved 2006), Standard Test Method for Moisture Analysis of Particulate Wood Fuels, (Approved November 1, 2006), IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(119) ASTM UOP539–12, Refinery Gas Analysis by GC, Copyright 2012 (to UOP), IBR approved for § 63.670(j).

(j) Bay Area Air Quality Management District (BAAQMD), 939 Ellis Street, San Francisco, California 94109, http://www.arb.ca.gov/DRDB/BA/CURHTML/ST/st30.pdf.

(1) "BAAQMD Source Test Procedure ST–30—Static Pressure Integrity Test, Underground Storage Tanks," adopted November 30, 1983, and amended December 21, 1994, IBR approved for § 63.11120(a).

(2) [Reserved]

(k) British Standards Institute, 389 Chiswick High Road, London W4 4AL, United Kingdom.

(1) BS EN 1593:1999, Non-destructive Testing: Leak Testing—Bubble Emission Techniques, IBR approved for § 63.425(i).

(2) BS EN 14662–4:2005, Ambient air quality standard method for the measurement of benzene concentrations—Part 4: Diffusive sampling followed by thermal desorption and gas chromatography, Published June 27, 2005, IBR approved for appendix A to this part: Method 325A and Method 325B.

(l) California Air Resources Board (CARB), 1001 I Street, P.O. Box 2815, Sacramento, CA 95812–2815, Telephone (916) 327–0900, http://www.arb.ca.gov/.

(1) Method 310, "Determination of Volatile Organic Compounds (VOC) in Consumer Products and Reactive Organic Compounds (ROC) in Aerosol Coating Products," amended May 25, 2018, IBR approved for § 63.8055(b).

(2) Method 428, "Determination Of Polychlorinated Dibenzo-P-Dioxin (PCDD), Polychlorinated Dibenzofuran (PCDF), and Polychlorinated Biphenyle Emissions from Stationary Sources," amended September 12, 1990, IBR approved for § 63.849(a)(13) and (14).

(3) Method 429, Determination of Polycyclic Aromatic Hydrocarbon (PAH) Emissions from Stationary Sources, Adopted September 12, 1989, Amended July 28, 1997, IBR approved for § 63.1625(b).

(4) California Air Resources Board Vapor Recovery Test Procedure TP–201.1—"Volumetric Efficiency for Phase I Vapor Recovery Systems," adopted April 12, 1996, and amended February 1, 2001 and October 8, 2003, IBR approved for § 63.11120(b).

(5) California Air Resources Board Vapor Recovery Test Procedure TP–201.1E—"Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves," adopted October 8, 2003, IBR approved for § 63.11120(a).

(6) California Air Resources Board Vapor Recovery Test Procedure TP–201.3—"Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities," adopted April 12, 1996 and amended March 17, 1999, IBR approved for § 63.11120(a).

(m) Composite Panel Association, 19465 Deerfield Avenue, Suite 306, Leesburg, VA 20176, Telephone (703)724–1128, and www.compositepanel.org.

(1) ANSI A135.4–2012, Basic Hardboard, approved June 8, 2012, IBR approved for § 63.4781.

(2) [Reserved]

(n) Environmental Protection Agency. Air and Radiation Docket and Information Center, 1200 Pennsylvania Avenue NW., Washington, DC 20460, telephone number (202) 566–1745.

(1) *California Regulatory Requirements Applicable to the Air Toxics Program,* November 16, 2010, IBR approved for § 63.99(a).

(2) New Jersey's *Toxic Catastrophe Prevention Act Program,* (July 20, 1998), IBR approved for § 63.99(a).

(3) Delaware Department of Natural Resources and Environmental Control, Division of Air and Waste Management, Accidental Release Prevention Regulation, sections 1 through 5 and sections 7 through 14, effective January 11, 1999, IBR approved for § 63.99(a).

(4) State of Delaware Regulations Governing the Control of Air Pollution (October 2000), IBR approved for § 63.99(a).

(5) Massachusetts Department of Environmental Protection regulations at 310 CMR 7.26(10)–(16), Air Pollution Control, effective as of September 5, 2008, corrected March 6, 2009, and 310 CMR 70.00, Environmental Results Program Certification, effective as of December 28, 2007. IBR approved for § 63.99(a).

(6)

(i) New Hampshire Regulations at Env-Sw 2100, Management and Control of Asbestos Disposal Sites Not Operated after July 9, 1981, effective February 16, 2010 (including a letter from Thomas S. Burack, Commissioner, Department of Environmental Services, State of New Hampshire, to Carol J. Holahan, Director, Office of Legislative Services, dated February 12, 2010, certifying that the enclosed rule, Env-Sw 2100, is the official version of this rule), IBR approved for § 63.99(a).

(ii) New Hampshire Code of Administrative Rules: Chapter Env-A 1800, Asbestos Management and Control, effective as of May 5, 2017 (certified with June 23, 2017 letter from Clark B. Freise, Assistant Commissioner, Department of Environmental Services, State of New Hampshire), as follows: Revision Notes #1 and #2; Part Env-A 1801–1807, excluding Env-A 1801.02(e), Env-A 1801.07, Env-A 1802.02, Env-A 1802.04, Env-A 1802.07–1802.09, Env-A 1802.13, Env-A 1802.15–1802.17, Env-A 1802.25, Env-A 1802.31, Env-A 1802.37, Env-A 1802.40, Env-A 1802.44, and Env-A 1803.05–1803.09; and Appendices B, C, and D; IBR approved for § 63.99(a).

(7) Maine Department of Environmental Protection regulations at Chapter 125, Perchloroethylene Dry Cleaner Regulation, effective as of June 2, 1991, last amended on June 24, 2009. IBR approved for § 63.99(a).

(8) California South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989," IBR approved for §§ 63.11173(e) and 63.11516(d).

(9) California South Coast Air Quality Management District's "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002," Revision 0, IBR approved for §§ 63.11173(e) and 63.11516(d).

(10) Rhode Island Department of Environmental Management regulations at Air Pollution Control Regulation No. 36, Control of Emissions from Organic Solvent Cleaning, effective April 8, 1996, last amended October 9, 2008, IBR approved for § 63.99(a).

(11) Rhode Island Air Pollution Control, General Definitions Regulation, effective July 19, 2007, last amended October 9, 2008. IBR approved for § 63.99(a).

(12) Alaska Statute 42.45.045. Renewable energy grant fund and recommendation program, available at http://www.legis.state.ak.us/basis/folio.asp, IBR approved for § 63.6675.

(13) Vermont Air Pollution Control Regulations, Chapter 5, Air Pollution Control, section 5–253.11, Perchloroethylene Dry Cleaning, effective as of December 15, 2016. Incorporation by reference approved for § 63.99(a).

(o) U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue NW., Washington, DC 20460, (202) 272–0167, http://www.epa.gov.

(1) EPA–453/R–08–002, Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat, published September 2008, IBR approved for §§ 63.3130(c), 63.3161(d) and (g), 63.3165(e), and appendix A to subpart IIII.

(2) EPA–453/R–01–005, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Integrated Iron and Steel Plants—Background Information for Proposed Standards, Final Report, January 2001, IBR approved for § 63.7491(g).

(3) [Reserved]

(4) EPA–454/R–98–015, Office of Air Quality Planning and Standards (OAQPS), Fabric Filter Bag Leak Detection Guidance, September 1997, https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=2000D5T6.PDF; IBR approved for §§ 63.548(e); 63.864(e); 63.7525(j); 63.8450(e); 63.8600(e); 63.9632(a); 63.9804(f); 63.11224(f); 63.11423(e).

(5) EPA–454/R–99–005, Office of Air Quality Planning and Standards (OAQPS), Meteorological Monitoring Guidance for Regulatory Modeling Applications, February 2000, IBR approved for appendix A to this part: Method 325A.

(6) EPA/600/R–12/531, EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards, May 2012, IBR approved for § 63.2163(b).

(7) EPA–625/3–89–016, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and –Dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989. IBR approved for § 63.1513(d).

(8) SW–846–0011, Sampling for Selected Aldehyde and Ketone Emissions from Stationary Sources, Revision 0, December 1996, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 4 to subpart DDDD.

(9) SW–846–3020A, Acid Digestion of Aqueous Samples And Extracts For Total Metals For Analysis By GFAA Spectroscopy, Revision 1, July 1992, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(10) SW–846–3050B, Acid Digestion of Sediments, Sludges, and Soils, Revision 2, December 1996, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(11) SW–846–5030B, Purge-And-Trap For Aqueous Samples, Revision 2, December 1996, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for § 63.2492(b) and (c).

(12) SW–846–5031, Volatile, Nonpurgeable, Water-Soluble Compounds by Azeotropic Distillation, Revision 0, December 1996, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for § 63.2492(b) and (c).

(13) SW–846–7470A, Mercury In Liquid Waste (Manual Cold-Vapor Technique), Revision 1, September 1994, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(14) SW–846–7471B, Mercury In Solid Or Semisolid Waste (Manual Cold-Vapor Technique), Revision 2, February 2007, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 6 to subpart DDDDD and table 5 to subpart JJJJJJ.

(15) SW–846–8015C, Nonhalogenated Organics by Gas Chromatography, Revision 3, February 2007, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for §§ 63.11960, 63.11980, and table 10 to subpart HHHHHHH.

(16) SW–846–8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), Revision 2, December 1996, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for §§ 63.1107(a), 63.11960, 63.11980, and table 10 to subpart HHHHHHH.

(17) SW–846–8260D, Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry, Revision 4, June 2018, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for § 63.2492(b) and (c).

(18) SW–846–8270D, Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), Revision 4, February 2007, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for §§ 63.1107(a), 63.11960, 63.11980, and table 10 to subpart HHHHHHH.

(19) SW–846–8315A, Determination of Carbonyl Compounds by High Performance Liquid Chromatography (HPLC), Revision 1, December 1996, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for §§ 63.11960 and 63.11980, and table 10 to subpart HHHHHHH.

(20) SW–846–5050, Bomb Preparation Method for Solid Waste, Revision 0, September 1994, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition IBR approved for table 6 to subpart DDDDD.

(21) SW–846–6010C, Inductively Coupled Plasma-Atomic Emission Spectrometry, Revision 3, February 2007, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 6 to subpart DDDDD.

(22) SW–846–6020A, Inductively Coupled Plasma-Mass Spectrometry, Revision 1, February 2007, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 6 to subpart DDDDD.

(23) SW–846–7060A, Arsenic (Atomic Absorption, Furnace Technique), Revision 1, September 1994, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 6 to subpart DDDDD.

(24) SW–846–7740, Selenium (Atomic Absorption, Furnace Technique), Revision 0, September 1986, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 6 to subpart DDDDD.

(25) SW–846–9056, Determination of Inorganic Anions by Ion Chromatography, Revision 1, February 2007, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 6 to subpart DDDDD.

(26) SW–846–9076, Test Method for Total Chlorine in New and Used Petroleum Products by Oxidative Combustion and Microcoulometry, Revision 0, September 1994, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 6 to subpart DDDDD.

(27) SW–846–9250, Chloride (Colorimetric, Automated Ferricyanide AAI), Revision 0, September 1986, in EPA Publication No. SW–846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, IBR approved for table 6 to subpart DDDDD.

(28) Method 200.8, Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma—Mass Spectrometry, Revision 5.4, 1994, IBR approved for table 6 to subpart DDDDD.

(29) Method 1631 Revision E, Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Absorption Fluorescence Spectrometry, Revision E, EPA–821–R–02–019, August 2002, IBR approved for table 6 to subpart DDDDD.

(p) International Standards Organization (ISO), 1, ch. de la Voie-Creuse, Case postale 56, CH–1211 Geneva 20, Switzerland, + 41 22 749 01 11, http://www.iso.org/iso/home.htm.

(1) ISO 6978–1:2003(E), Natural Gas—Determination of Mercury—Part 1: Sampling of Mercury by Chemisorption on Iodine, First edition, October 15, 2003, IBR approved for table 6 to subpart DDDDD.

(2) ISO 6978–2:2003(E), Natural gas—Determination of Mercury—Part 2: Sampling of Mercury by Amalgamation on Gold/Platinum Alloy, First edition, October 15, 2003, IBR approved for table 6 to subpart DDDDD.

(3) ISO 16017–2:2003(E): Indoor, ambient and workplace air—sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography—Part 2: Diffusive sampling, May 15, 2003, IBR approved for appendix A to this part: Method 325A and Method 325B.

(q) National Council of the Paper Industry for Air and Stream Improvement, Inc. (NCASI), P.O. Box 133318, Research Triangle Park, NC 27709–3318 or at http://www.ncasi.org.

(1) NCASI Method DI/MEOH–94.03, Methanol in Process Liquids and Wastewaters by GC/FID, Issued May 2000, IBR approved for §§ 63.457 and 63.459.

(2) NCASI Method CI/WP–98.01, Chilled Impinger Method For Use At Wood Products Mills to Measure Formaldehyde, Methanol, and Phenol, 1998, Methods Manual, IBR approved for table 4 to subpart DDDD.

(3) NCASI Method DI/HAPS–99.01, Selected HAPs In Condensates by GC/FID, Issued February 2000, IBR approved for § 63.459(b).

(4) NCASI Method IM/CAN/WP–99.02, Impinger/Canister Source Sampling Method for Selected HAPs and Other Compounds at Wood Products Facilities, January 2004, Methods Manual, IBR approved for table 4 to subpart DDDD.

(5) NCASI Method ISS/FP A105.01, Impinger Source Sampling Method for Selected Aldehydes, Ketones, and Polar Compounds, December 2005, Methods Manual, IBR approved for table 4 to subpart DDDD and §§ 63.4751(i) and 63.4752(e).

(r) National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 605–6000 or (800) 553–6847; or for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512–1800.

(1) Handbook 44, Specificiations, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices 1998, IBR approved for § 63.1303(e).

(2) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW–846, Third Edition. (A suffix of "A" in the method number indicates revision one (the method has been revised once). A suffix of "B" in the method number indicates revision two (the method has been revised twice).

(i) Method 0023A, "Sampling Method for Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofuran Emissions from Stationary Sources," Revision 2, dated August 2018, IBR approved for § 63.1208(b).

(ii) Method 9071B, "n-Hexane Extractable Material (HEM) for Sludge, Sediment, and Solid Samples," dated April 1998, IBR approved for § 63.7824(e).

(iii) Method 9095A, "Paint Filter Liquids Test," dated December 1996, IBR approved for §§ 63.7700(b) and 63.7765.

(iv) Method 9095B, "Paint Filter Liquids Test," (revision 2), dated November 2004, IBR approved for the definition of "Free organic liquids" in §§ 63.10692, 63.10885(a), and the definition of "Free liquids" in § 63.10906.

(v) SW–846 74741B, Revision 2, "Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique)," February 2007, IBR approved for § 63.11647(f).

(3) National Institute of Occupational Safety and Health (NIOSH) test method compendium, "NIOSH Manual of Analytical Methods," NIOSH publication no. 94–113, Fourth Edition, August 15, 1994.

(i) NIOSH Method 2010, "Amines, Aliphatic," Issue 2, August 15, 1994, IBR approved for § 63.7732(g).

(ii) [Reserved]

(s) North American Electric Reliability Corporation, 1325 G Street, NW., Suite 600, Washington, DC 20005–3801, http://www.nerc.com, http://www.nerc.com/files/EOP0002-3_1.pdf.

(1) North American Electric Reliability Corporation Reliability Standard EOP–002–3, Capacity and Energy Emergencies, adopted August 5, 2010, IBR approved for § 63.6640(f).

(2) [Reserved]

(t) Technical Association of the Pulp and Paper Industry (TAPPI), 15 Technology Parkway South, Norcross, GA 30092, (800) 332–8686, http://www.tappi.org.

(1) TAPPI T 266, Determination of Sodium, Calcium, Copper, Iron, and Manganese in Pulp and Paper by Atomic Absorption Spectroscopy (Reaffirmation of T 266 om-02), Draft No. 2, July 2006, IBR approved for table 6 to subpart DDDDD.

(2) [Reserved]

(u) Texas Commission on Environmental Quality (TCEQ) Library, Post Office Box 13087, Austin, Texas 78711–3087, telephone number (512) 239–0028, http://www.tceq.state.tx.us/assets/public/implementation/air/sip/sipdocs/2002-12-HGB/02046sipapp_ado.pdf.

(1) "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources," Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling

Tower Monitoring, January 31, 2003, IBR approved for §§ 63.654(c) and (g), 63.655(i), 63.1086(e), 63.1089, 63.2490(d), 63.2525(r), and 63.11920.

(2) [Reserved]

Editorial Note

Editorial Note: For Federal Register citations affecting § 63.14, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.govinfo.gov.*

§ 63.15 Availability of information and confidentiality.

(a) *Availability of information.*

(1) With the exception of information protected through part 2 of this chapter, all reports, records, and other information collected by the Administrator under this part are available to the public. In addition, a copy of each permit application, compliance plan (including the schedule of compliance), notification of compliance status, excess emissions and continuous monitoring systems performance report, and title V permit is available to the public, consistent with protections recognized in section 503(e) of the Act.

(2) The availability to the public of information provided to or otherwise obtained by the Administrator under this part shall be governed by part 2 of this chapter.

(b) *Confidentiality.*

(1) If an owner or operator is required to submit information entitled to protection from disclosure under section 114(c) of the Act, the owner or operator may submit such information separately. The requirements of section 114(c) shall apply to such information.

(2) The contents of a title V permit shall not be entitled to protection under section 114(c) of the Act; however, information submitted as part of an application for a title V permit may be entitled to protection from disclosure.

§ 63.16 Performance Track Provisions.

(a) Notwithstanding any other requirements in this part, an affected source at any major source or any area source at a Performance Track member facility, which is subject to regular periodic reporting under any subpart of this part, may submit such periodic reports at an interval that is twice the length of the regular period specified in the applicable subparts; provided, that for sources subject to permits under 40 CFR part 70 or 71 no interval so calculated for any report of the results of any required monitoring may be less frequent than once in every six months.

(b) Notwithstanding any other requirements in this part, the modifications of reporting requirements in paragraph (c) of this section apply to any major source at a Performance Track member facility which is subject to requirements under any of the subparts of this part and which has:

(1) Reduced its total HAP emissions to less than 25 tons per year;

(2) Reduced its emissions of each individual HAP to less than 10 tons per year; and

(3) Reduced emissions of all HAPs covered by each MACT standard to at least the level required for full compliance with the applicable emission standard.

(c) For affected sources at any area source at a Performance Track member facility and which meet the requirements of paragraph (b)(3) of this section, or for affected sources at any major source that meet the requirements of paragraph (b) of this section:

(1) If the emission standard to which the affected source is subject is based on add-on control technology, and the affected source complies by using add-on control technology, then all required reporting elements in the periodic report may be met through an annual certification that the affected source is meeting the emission standard by continuing to use that control technology. The affected source must continue to meet all relevant monitoring and

recordkeeping requirements. The compliance certification must meet the requirements delineated in Clean Air Act section 114(a)(3).

(2) If the emission standard to which the affected source is subject is based on add-on control technology, and the affected source complies by using pollution prevention, then all required reporting elements in the periodic report may be met through an annual certification that the affected source is continuing to use pollution prevention to reduce HAP emissions to levels at or below those required by the applicable emission standard. The affected source must maintain records of all calculations that demonstrate the level of HAP emissions required by the emission standard as well as the level of HAP emissions achieved by the affected source. The affected source must continue to meet all relevant monitoring and recordkeeping requirements. The compliance certification must meet the requirements delineated in Clean Air Act section 114(a)(3).

(3) If the emission standard to which the affected source is subject is based on pollution prevention, and the affected source complies by using pollution prevention and reduces emissions by an additional 50 percent or greater than required by the applicable emission standard, then all required reporting elements in the periodic report may be met through an annual certification that the affected source is continuing to use pollution prevention to reduce HAP emissions by an additional 50 percent or greater than required by the applicable emission standard. The affected source must maintain records of all calculations that demonstrate the level of HAP emissions required by the emission standard as well as the level of HAP emissions achieved by the affected source. The affected source must continue to meet all relevant monitoring and recordkeeping requirements. The compliance certification must meet the requirements delineated in Clean Air Act section 114(a)(3).

(4) Notwithstanding the provisions of paragraphs (c)(1) through (3), of this section, for sources subject to permits under 40 CFR part 70 or 71, the results of any required monitoring and recordkeeping must be reported not less frequently than once in every six months.

Table 1 to Subpart A of Part 63 - Detection Sensitivity Levels (grams per hour)

Monitoring frequency per subpart[a]	Detection sensitivity level
Bi-Monthly	60
Semi-Quarterly	85
Monthly	100

[a] When this alternative work practice is used to identify leaking equipment, the owner or operator must choose one of the monitoring frequencies listed in this table, in lieu of the monitoring frequency specified in the applicable subpart. Bi-monthly means every other month. Semi-quarterly means twice per quarter. Monthly means once per month.

Appendix E. 40 CFR pt. 63, Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

§ 63.7480 What is the purpose of this subpart?

This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards.

§ 63.7485 Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in § 63.7575 that is located at, or is part of, a major source of HAP, except as specified in § 63.7491. For purposes of this subpart, a major source of HAP is as defined in § 63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in § 63.7575.

§ 63.7490 What is the affected source of this subpart?

(a) This subpart applies to new, reconstructed, and existing affected sources as described in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in § 63.7575.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in § 63.7575, located at a major source.

(b) A boiler or process heater is new if you commence construction of the boiler or process heater after June 4, 2010, and you meet the applicability criteria at the time you commence construction.

(c) A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in § 63.2, you commence reconstruction after June 4, 2010, and you meet the applicability criteria at the time you commence reconstruction.

(d) A boiler or process heater is existing if it is not new or reconstructed.

(e) An existing electric utility steam generating unit (EGU) that meets the applicability requirements of this subpart after the effective date of this final rule due to a change (e.g., fuel switch) is considered to be an existing source under this subpart.

§ 63.7491 Are any boilers or process heaters not subject to this subpart?

The types of boilers and process heaters listed in paragraphs (a) through (n) of this section are not subject to this subpart.

(a) An electric utility steam generating unit (EGU) covered by subpart UUUUU of this part or a natural gas-fired EGU as defined in subpart UUUUU of this part firing at least 85 percent natural gas on an annual heat input basis.

(b) A recovery boiler or furnace covered by subpart MM of this part.

(c) A boiler or process heater that is used specifically for research and development, including test steam boilers used to provide steam for testing the propulsion systems on military vessels. This does not include units that provide heat or steam to a process at a research and development facility.

(d) A hot water heater as defined in this subpart.

(e) A refining kettle covered by subpart X of this part.

(f) An ethylene cracking furnace covered by subpart YY of this part.

(g) Blast furnace stoves as described in EPA-453/R-01-005 (incorporated by reference, see § 63.14).

(h) Any boiler or process heater that is part of the affected source subject to another subpart of this part, such as boilers and process heaters used as control devices to comply with subparts JJJ, OOO, PPP, and U of this part.

(i) Any boiler or process heater that is used as a control device to comply with another subpart of this part, or part 60, part 61, or part 65 of this chapter provided that at least 50 percent of the average annual heat input during any 3 consecutive calendar years to the boiler or process heater is provided by regulated gas streams that are subject to another standard.

(j) Temporary boilers and process heaters as defined in this subpart.

(k) Blast furnace gas fuel-fired boilers and process heaters as defined in this subpart.

(l) Any boiler or process heater specifically listed as an affected source in any standard(s) established under section 129 of the Clean Air Act.

(m) A unit that burns hazardous waste covered by Subpart EEE of this part. A unit that is exempt from Subpart EEE as specified in § 63.1200(b) is not covered by Subpart EEE.

(n) Residential boilers as defined in this subpart.

§ 63.7495 When do I have to comply with this subpart?

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by April 1, 2013, or upon startup of your boiler or process heater, whichever is later.

(b) If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in § 63.6(i).

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, paragraphs (c)(1) and (2) of this section apply to you.

(1) Any new or reconstructed boiler or process heater at the existing source must be in compliance with this subpart upon startup.

(2) Any existing boiler or process heater at the existing source must be in compliance with this subpart within 3 years after the source becomes a major source.

(d) You must meet the notification requirements in § 63.7545 according to the schedule in § 63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.

(e) If you own or operate an industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for the exemption in § 63.7491(l) for commercial and industrial solid waste incineration units covered by part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart and are no longer subject to part 60, subparts CCCC or DDDD beginning on the effective date of the switch as identified under the provisions of § 60.2145(a)(2) and (3) or § 60.2710(a)(2) and (3).

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2016, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.

(g) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for a exemption in § 63.7491(i) that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart within 3 years after such unit becomes subject to this subpart.

(h) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory after the compliance date of this subpart, you must be in compliance with the applicable existing source provisions of this subpart on the effective date of the fuel switch or physical change.

(i) If you own or operate a new industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory, you must be in compliance with the applicable new source provisions of this subpart on the effective date of the fuel switch or physical change.

Emission Limitations and Work Practice Standards

§ 63.7499 What are the subcategories of boilers and process heaters?

The subcategories of boilers and process heaters, as defined in § 63.7575 are:

(a) Pulverized coal/solid fossil fuel units.

(b) Stokers designed to burn coal/solid fossil fuel.

(c) Fluidized bed units designed to burn coal/solid fossil fuel.

(d) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solid.

(e) Fluidized bed units designed to burn biomass/bio-based solid.

(f) Suspension burners designed to burn biomass/bio-based solid.

(g) Fuel cells designed to burn biomass/bio-based solid.

(h) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(i) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid.

(j) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(k) Units designed to burn liquid fuel that are non-continental units.

(l) Units designed to burn gas 1 fuels.

(m) Units designed to burn gas 2 (other) gases.

(n) Metal process furnaces.

(o) Limited-use boilers and process heaters.

(p) Units designed to burn solid fuel.

(q) Units designed to burn liquid fuel.

(r) Units designed to burn coal/solid fossil fuel.

(s) Fluidized bed units with an integrated fluidized bed heat exchanger designed to burn coal/solid fossil fuel.

(t) Units designed to burn heavy liquid fuel.

(u) Units designed to burn light liquid fuel.

§ 63.7500 What emission limitations, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b) through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3 and 11 through 15 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under § 63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in Table 1 or 2 to this subpart are an alternative applicable only to boilers and process heaters that generate either steam, cogenerate steam with electricity, or both. The output-based emission limits, in units of pounds per megawatt-hour, in Table 1 or 2 to this subpart are an alternative applicable only to boilers that generate only electricity. Boilers that perform multiple functions (cogeneration and electricity generation) or supply steam to common headers would calculate a total steam energy output using Equation 1 of § 63.7575 to demonstrate compliance with the output-based emission limits, in units of pounds per million Btu of steam output, in Table 1 or 2 to this subpart. If you operate a new boiler or process heater, you can choose to comply with alternative limits as discussed in paragraphs (a)(1)(i) through (iv) of this section, but on or after October 6, 2025, you must comply with the emission limits in Table 1 to this subpart. If you operate an existing boiler or process heater, you can choose to comply with alternative limits as discussed in paragraph (a)(1)(v) of this section, but on or after October 6, 2025 you must comply with the emission limits in Table 2 to this subpart.

(i) If your boiler or process heater commenced construction or reconstruction after June 4, 2010, and before May 20, 2011, you may comply with the emission limits in Table 11 or 14 to this subpart until January 31, 2016.

(ii) If your boiler or process heater commenced construction or reconstruction on or after May 20, 2011, and before December 23, 2011, you may comply with the emission limits in Table 12 or 14 to this subpart until January 31, 2016.

(iii) If your boiler or process heater commenced construction or reconstruction on or after December 23, 2011, and before April 1, 2013, you may comply with the emission limits in Table 13 or 14 to this subpart until January 31, 2016.

(iv) If you operate a new boiler or process heater, you must comply with either the emission limits in Table 1 to this subpart or the emission limits in Table 14 to this subpart until you must comply with the emission limits in Table 1.

(v) If you operate an existing boiler or process heater, you must comply with either the emission limits in Table 2 to this subpart or the emission limits in Table 15 to this subpart until you must comply with the emission limits in Table 2.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to this subpart, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under § 63.8(f).

(3) At all times, you must operate and maintain any affected source (as defined in § 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) As provided in § 63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in § 63.7540. They are not subject to the emission limits in Tables 1 and 2 or Tables 11 through 15 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.

(d) Boilers and process heaters with a heat input capacity of less than or equal to 5 million Btu per hour in the units designed to burn gas 2 (other) fuels subcategory or units designed to burn light liquid fuels subcategory must complete a tune-up every 5 years as specified in § 63.7540.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or Tables 11 through 15 to this subpart, or the operating limits in Table 4 to this subpart.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with items 5 and 6 of Table 3 to this subpart.

§ 63.7501 [Reserved]

General Compliance Requirements

§ 63.7505 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These emission and operating limits apply to you at all times the affected unit is operating except for the periods noted in § 63.7500(f).

(b) [Reserved]

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS), continuous parameter monitoring system (CPMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to § 63.7530(c) is less than the applicable emission limit. For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard. Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance stack testing, if subject to an applicable emission limit listed in Table 1 or 2 or Tables 11 through 15 to this subpart.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits through the use of CPMS, or with a CEMS or COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f).

(1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in § 63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of § 63.7525. Using the process described in § 63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c) (as applicable in Table 10 to this subpart), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

(e) If you have an applicable emission limit, and you choose to comply using definition (2) of "startup" in § 63.7575, you must develop and implement a written startup and shutdown plan (SSP) according to the requirements in Table 3 to this subpart. The SSP must be maintained onsite and available upon request for public inspection.

Testing, Fuel Analyses, and Initial Compliance Requirements

§ 63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart through performance (stack) testing, your initial compliance requirements include all the following:

(1) Conduct performance tests according to § 63.7520 and Table 5 to this subpart.

(2) Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart, except as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart. For purposes of this subpart, units that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under § 63.7521 and Table 6 to this subpart.

(ii) When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those Gas 1 fuels according to § 63.7521 and Table 6 to this subpart. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those non-Gas 1 gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those non-Gas 1 fuels according to § 63.7521 and Table 6 to this subpart.

(iii) You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in paragraphs (a)(2)(i) and (ii) of this section.

(3) Establish operating limits according to § 63.7530 and Table 7 to this subpart.

(4) Conduct CMS performance evaluations according to § 63.7525.

(b) For each boiler or process heater that you elect to demonstrate compliance with the applicable emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart and establish operating limits according to § 63.7530 and Table 8 to this subpart. The fuels described in paragraphs (a)(2)(i) and (ii) of this section are exempt from these fuel analysis and operating limit requirements. The fuels described in paragraph (a)(2)(ii) of this section are exempt from the chloride fuel analysis and operating limit requirements. Boilers and process heaters that use a CEMS for mercury or HCl are exempt from the performance testing and operating limit requirements specified in paragraph (a) of this section for the HAP for which CEMS are used.

(c) If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to this subpart or conduct a performance evaluation of your continuous CO monitor, if applicable, according to § 63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Table 1 or 2 or Tables 11 through 15 to this subpart, as specified in § 63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section.

(d) If your boiler or process heater is subject to a PM limit, your initial compliance demonstration for PM is to conduct a performance test in accordance with § 63.7520 and Table 5 to this subpart.

(e) For existing affected sources (as defined in § 63.7490), you must complete the initial compliance demonstrations, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in § 63.7495 and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in § 63.7495.

(f) For new or reconstructed affected sources (as defined in § 63.7490), you must complete the initial compliance demonstration with the emission limits no later than July 30, 2013, or within 180 days after startup of the source, whichever is later.

(1) If you are demonstrating compliance with an emission limit in Tables 11 through 13 to this subpart that is less stringent than the applicable emission limit in Table 14 to this subpart, you must demonstrate compliance with the applicable emission limit in Table 14 no later than July 29, 2016.

(2) If you are demonstrating compliance with an emission limit in Table 14 to this subpart that is less stringent than the applicable emission limit in Table 1 to this subpart, you must demonstrate compliance with the applicable emission limit in Table 1 no later than October 6, 2025.

(g) For new or reconstructed affected sources (as defined in § 63.7490), you must demonstrate initial compliance with the applicable work practice standards in Table 3 to this subpart within the applicable annual, biennial, or 5-year schedule as specified in § 63.7515(d) following the initial compliance date specified in § 63.7495(a). Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in § 63.7515(d).

(h) For affected sources (as defined in § 63.7490) that ceased burning solid waste consistent with § 63.7495(e) and for which the initial compliance date has passed, you must demonstrate compliance within 60 days of the effective date of

the waste-to-fuel switch. If you have not conducted your compliance demonstration for this subpart within the previous 12 months, you must complete all compliance demonstrations for this subpart before you commence or recommence combustion of solid waste.

(i) For an existing EGU that becomes subject after January 31, 2016, you must demonstrate compliance within 180 days after becoming an affected source.

(j) For existing affected sources (as defined in § 63.7490) that have not operated between the effective date of the rule and the compliance date that is specified for your source in § 63.7495, you must complete the initial compliance demonstration, if subject to the emission limits in Table 2 or 14 to this subpart, as applicable, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than 30 days after the re-start of the affected source and, if applicable, complete the one-time energy assessment specified in Table 3 to this subpart, no later than the compliance date specified in § 63.7495.

(k) For affected sources, as defined in § 63.7490, that switch subcategories consistent with § 63.7545(h) after the initial compliance date, you must demonstrate compliance within 60 days of the effective date of the switch, unless you had previously conducted your compliance demonstration for this subcategory within the previous 12 months.

§ 63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?

(a) You must conduct all applicable performance tests according to § 63.7520 on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of this section. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of this section.

(b) If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 15 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under § 63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM.

(c) If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Tables 1 and 2 or 11 through 15 to this subpart) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Tables 1 and 2 or 11 through 15).

(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to § 63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in § 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in § 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in § 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in § 63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013 or the initial startup of the new or reconstructed affected source, whichever is later.

(e) If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to § 63.7521 for each type of fuel burned that is subject to an emission limit in Table 1 or 2 or

Tables 11 through 15 to this subpart. You may comply with this monthly requirement by completing the fuel analysis any time within the calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in § 63.7540. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level. If sampling is conducted on 1 day per month, samples should be no less than 14 days apart, but if multiple samples are taken per month, the 14-day restriction does not apply.

(f) You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to § 63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests must include all applicable information required in § 63.7550.

(g) For affected sources (as defined in § 63.7490) that have not operated since the previous compliance demonstration and more than 1 year has passed since the previous compliance demonstration, you must complete the subsequent compliance demonstration, if subject to the emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete a subsequent tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) and the schedule described in § 63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up.

(h) If your affected boiler or process heater is in the unit designed to burn light liquid subcategory and you combust ultra-low sulfur liquid fuel, you do not need to conduct further performance tests (stack tests or fuel analyses) if the pollutants measured during the initial compliance performance tests meet the emission limits in Tables 1 or 2 of this subpart providing you demonstrate ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis. If you intend to use a fuel other than ultra-low sulfur liquid fuel, natural gas, refinery gas, or other gas 1 fuel, you must conduct new performance tests within 60 days of burning the new fuel type.

(i) If you operate a CO CEMS that meets the Performance Specifications outlined in § 63.7525(a)(3) to demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Table 1 or 2 or Tables 11 through 15 to this subpart, you are not required to conduct CO performance tests and are not subject to the oxygen concentration operating limit requirement specified in § 63.7510(a).

§ 63.7520 What stack tests and procedures must I use?

(a) You must conduct all performance tests according to § 63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in § 63.7(c). You shall conduct all performance tests under such conditions as the Administrator specifies to you based on the representative performance of each boiler or process heater for the period being tested. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(c) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to this subpart. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following

each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(d) You must conduct a minimum of three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Tables 1 and 2 or 11 through 15 to this subpart.

(e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 at 40 CFR part 60, appendix A-7 of this chapter to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates.

(f) Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level.

§ 63.7521 What fuel analyses, fuel specification, and procedures must I use?

(a) For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard. For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Tables 1 and 2 or 11 through 15 to this subpart. Gaseous and liquid fuels are exempt from the sampling requirements in paragraphs (c) and (d) of this section.

(b) You must develop a site-specific fuel monitoring plan according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section, if you are required to conduct fuel analyses as specified in § 63.7510.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (b)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph

(c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.

(iv) For each anticipated fuel type, the analytical methods from Table 6, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(c) You must obtain composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section, or the methods listed in Table 6 to this subpart, or use an automated sampling mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material. At a minimum, for demonstrating initial compliance by fuel analysis, you must obtain three composite samples. For monthly fuel analyses, at a minimum, you must obtain a single composite sample. For fuel analyses as part of a performance stack test, as specified in § 63.7510(a), you must obtain a composite fuel sample during each performance test run.

(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.

(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. You must collect all the material (fines and coarse) in the full cross-section. You must transfer the sample to a clean plastic bag.

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal intervals during the testing period for sampling during performance stack testing.

(2) If sampling from a fuel pile or truck, you must collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this section.

(i) For each composite sample, you must select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, you must dig into the pile to a uniform depth of approximately 18 inches. You must insert a clean shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling; use the same shovel to collect all samples.

(iii) You must transfer all samples to a clean plastic bag for further processing.

(d) You must prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) You must thoroughly mix and pour the entire composite sample over a clean plastic sheet.

(2) You must break large sample pieces (e.g., larger than 3 inches) into smaller sizes.

(3) You must make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) You must separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, you must repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) You must grind the sample in a mill.

(7) You must use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) You must determine the concentration of pollutants in the fuel (mercury and/or chlorine and/or TSM) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to this subpart, for use in Equations 7, 8, and 9 of this subpart.

(f) To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in § 63.7575, you must conduct a fuel specification analyses for mercury according to the procedures in paragraphs (g) through (i) of this section and Table 6 to this subpart, as applicable, except as specified in paragraph (f)(1) through (4) of this section, or as an alternative where fuel specification analysis is not practical, you must measure mercury concentration in the exhaust gas when firing only the gaseous fuel to be demonstrated as an other gas 1 fuel in the boiler or process heater according to the procedures in Table 6 to this subpart.

(1) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for natural gas or refinery gas.

(2) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gaseous fuels that are subject to another subpart of this part, part 60, part 61, or part 65.

(3) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section on gaseous fuels for units that are complying with the limits for units designed to burn gas 2 (other) fuels.

(4) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gas streams directly derived from natural gas at natural gas production sites or natural gas plants.

(g) You must develop a site-specific fuel analysis plan for other gas 1 fuels according to the following procedures and requirements in paragraphs (g)(1) and (2) of this section.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all gaseous fuel types other than those exempted from fuel specification analysis under (f)(1) through (3) of this section anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the identification of whether you or a fuel supplier will be conducting the fuel specification analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the samples if your procedures are different from the sampling methods contained in Table 6 to this subpart. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types. If multiple boilers or process heaters are fueled by a common fuel stream it is permissible to conduct a single gas specification at the common point of gas distribution.

(iv) For each anticipated fuel type, the analytical methods from Table 6 to this subpart, with the expected minimum detection levels, to be used for the measurement of mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 to this subpart shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart. When using a fuel supplier's fuel analysis, the owner or operator is not required to submit the information in § 63.7521(g)(2)(iii).

(h) You must obtain a single fuel sample for each fuel type for fuel specification of gaseous fuels.

(i) You must determine the concentration in the fuel of mercury, in units of microgram per cubic meter, dry basis, of each sample for each other gas 1 fuel type according to the procedures in Table 6 to this subpart.

§ 63.7522 Can I use emissions averaging to comply with this subpart?

(a) As an alternative to meeting the requirements of § 63.7500 for PM (or TSM), HCl, or mercury on a boiler or process heater-specific basis, if you have more than one existing boiler or process heater in any subcategories located at your facility, you may demonstrate compliance by emissions averaging, if your averaged emissions are not more than 90 percent of the applicable emission limit, according to the procedures in this section. You may not include new boilers or process heaters in an emissions average.

(b) For a group of two or more existing boilers or process heaters in the same subcategory that each vent to a separate stack, you may average PM (or TSM), HCl, or mercury emissions among existing units to demonstrate compliance with the limits in Table 2 or 15 to this subpart as specified in paragraphs (b)(1) through (3) of this section, if you satisfy the requirements in paragraphs (c) through (g) of this section.

(1) You may average units using a CEMS or PM CPMS for demonstrating compliance.

(2) For mercury and HCl, averaging is allowed as follows:

(i) You may average among units in any of the solid fuel subcategories.

(ii) You may average among units in any of the liquid fuel subcategories.

(iii) You may average among units in a subcategory of units designed to burn gas 2 (other) fuels.

(iv) You may not average across the units designed to burn liquid, units designed to burn solid fuel, and units designed to burn gas 2 (other) subcategories.

(3) For PM (or TSM), averaging is only allowed between units within each of the following subcategories and you may not average across subcategories:

(i) Units designed to burn coal/solid fossil fuel.

(ii) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solids.

(iii) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solids.

(iv) Fluidized bed units designed to burn biomass/bio-based solid.

(v) Suspension burners designed to burn biomass/bio-based solid.

(vi) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(vii) Fuel Cells designed to burn biomass/bio-based solid.

(viii) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(ix) Units designed to burn heavy liquid fuel.

(x) Units designed to burn light liquid fuel.

(xi) Units designed to burn liquid fuel that are non-continental units.

(xii) Units designed to burn gas 2 (other) gases.

(c) For each existing boiler or process heater in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on April 1, 2013 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on April 1, 2013.

(d) The averaged emissions rate from the existing boilers and process heaters participating in the emissions averaging option must not exceed 90 percent of the limits in Table 2 or 15 to this subpart at all times the affected units are subject to numeric emission limits following the compliance date specified in § 63.7495.

(e) You must demonstrate initial compliance according to paragraph (e)(1) or (2) of this section using the maximum rated heat input capacity or maximum steam generation capacity of each unit and the results of the initial performance tests or fuel analysis.

(1) You must use Equation 1a or 1b or 1c to this paragraph (e)(1) to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option for that pollutant do not exceed the emission limits in Table 2 or 15 to this subpart. Use Equation 1a if you are complying with the emission limits on a heat input basis, use Equation 1b if you are complying with the emission limits on a steam generation (output) basis, and use Equation 1c if you are complying with the emission limits on a electric generation (output) basis.

Equation 1a to paragraph (e)(1)

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hm) \div \sum_{i=1}^{n} Hm \qquad \text{(Eq. 1a)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Hm = Maximum rated heat input capacity of unit, i, in units of million Btu per hour.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

Equation 1b to paragraph (e)(1)

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq. 1b)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable

equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

So = Maximum steam output capacity of unit, i, in units of million Btu per hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

Equation 1c to paragraph (e)(1)

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \qquad \text{(Eq. 1c)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

Eo = Maximum electric generating output capacity of unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of determining the maximum rated heat input capacity of one or more boilers that generate steam, you may use Equation 2 to this paragraph (e)(2) as an alternative to using Equation 1a of paragraph (e)(1) of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option do not exceed the emission limits for that pollutant in Table 2 or 15 to this subpart that are in pounds per million Btu of heat input.

Equation 2 to paragraph (e)(2)

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sm \times Cfi) \div \sum_{i=1}^{n} (Sm \times Cfi) \qquad \text{(Eq. 2)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Sm = Maximum steam generation capacity by unit, i, in units of pounds per hour.

Cfi = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for unit, i.

1.1 = Required discount factor.

(f) After the initial compliance demonstration described in paragraph (e) of this section, you must demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) through (3) of this section. The first monthly period begins on the compliance date specified in § 63.7495. If the affected source elects to collect monthly data for up the 11 months preceding the first monthly period, these additional data points can be used to compute the 12-month rolling average in paragraph (f)(3) of this section.

(1) For each calendar month, you must use Equation 3a or 3b or 3c of this section to calculate the average weighted emission rate for that month. Use Equation 3a and the actual heat input for the month for each existing unit participating in the emissions averaging option if you are complying with emission limits on a heat input basis. Use Equation 3b and the actual steam generation for the month if you are complying with the emission limits on a steam generation (output) basis. Use Equation 3c and the actual electrical generation for the month if you are complying with the emission limits on an electrical generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hb) \div \sum_{i=1}^{n} Hb \qquad \text{(Eq. 3a)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Hb = The heat input for that calendar month to unit, i, in units of million Btu.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq. 3b)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, E_{adj}, determined according to § 63.7533 for that unit.

So = The steam output for that calendar month from unit, i, in units of million Btu, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \quad \text{(Eq. 3c)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, E_{adj}, determined according to § 63.7533 for that unit.

Eo = The electric generating output for that calendar month from unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of monitoring heat input, you may use Equation 4 of this section as an alternative to using Equation 3a of this section to calculate the average weighted emission rate using the actual steam generation from the boilers participating in the emissions averaging option.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sa \times Cfi) \div \sum_{i=1}^{n} (Sa \times Cfi) \quad \text{(Eq. 4)}$$

Where:

AveWeightedEmissions = average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Sa = Actual steam generation for that calendar month by boiler, i, in units of pounds.

Cfi = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for boiler, i.

1.1 = Required discount factor.

(3) Until 12 monthly weighted average emission rates have been accumulated, calculate and report only the average weighted emission rate determined under paragraph (f)(1) or (2) of this section for each calendar month. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, use Equation 5 of this section to calculate the 12-month rolling average of the monthly weighted average emission rates for the current calendar month and the previous 11 calendar months.

$$Eavg = \sum_{i=1}^{n} ERi \div 12 \quad \text{(Eq. 5)}$$

Where:

Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)

ERi = Monthly weighted average, for calendar month "i" (pounds per million Btu heat input), as calculated by paragraph (f)(1) or (2) of this section.

(g) You must develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging according to the following procedures and requirements in paragraphs (g)(1) through (4) of this section.

(1) If requested, you must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing boilers and process heaters in the averaging group, including for each either the applicable HAP emission level or the control technology installed as of January 31, 2013 and the date on which you are requesting emission averaging to commence;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;

(iii) The specific control technology or pollution prevention measure to be used for each emission boiler or process heater in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the owner or operator must identify each boiler or process heater;

(iv) The test plan for the measurement of PM (or TSM), HCl, or mercury emissions in accordance with the requirements in § 63.7520;

(v) The operating parameters to be monitored for each control system or device consistent with § 63.7500 and Table 4, and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to § 63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Administrator, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating load conditions. Following each compliance demonstration and until the next compliance demonstration, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(3) If submitted upon request, the Administrator shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources; or

(ii) The inclusion of any emission source other than an existing unit in the same subcategories.

(h) For a group of two or more existing affected units, each of which vents through a single common stack, you may average PM (or TSM), HCl, or mercury emissions to demonstrate compliance with the limits for that pollutant in Table 2 or 15 to this subpart if you satisfy the requirements in paragraph (i) or (j) of this section.

(i) For a group of two or more existing units in the same subcategory, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.

(j) For all other groups of units subject to the common stack requirements of paragraph (h) of this section, including situations where the exhaust of affected units are each individually controlled and then sent to a common stack, the owner or operator may elect to:

(1) Conduct performance tests according to procedures specified in § 63.7520 in the common stack if affected units from other subcategories vent to the common stack. The emission limits that the group must comply with are determined by the use of Equation 6 to this paragraph (j)(1).

Equation 6 to paragraph (j)(1)

$$En = \sum_{i=1}^{n} (ELi \times Hi) \div \sum_{i=1}^{n} Hi \qquad \text{(Eq. 6)}$$

Where:

En = HAP emission limit, pounds per million British thermal units (lb/MMBtu) or parts per million (ppm).

ELi = Appropriate emission limit from Table 2 or 15 to this subpart for unit i, in units of lb/MMBtu or ppm.

Hi = Heat input from unit i, MMBtu.

(2) Conduct performance tests according to procedures specified in § 63.7520 in the common stack. If affected units and non-affected units vent to the common stack, the non-affected units must be shut down or vented to a different stack during the performance test unless the facility determines to demonstrate compliance with the non-affected units venting to the stack; and

(3) Meet the applicable operating limit specified in § 63.7540 and Table 8 to this subpart for each emissions control system (except that, if each unit venting to the common stack has an applicable opacity operating limit, then a single continuous opacity monitoring system may be located in the common stack instead of in each duct to the common stack).

(k) The common stack of a group of two or more existing boilers or process heaters in the same subcategories subject to paragraph (h) of this section may be treated as a separate stack for purposes of paragraph (b) of this section and included in an emissions averaging group subject to paragraph (b) of this section.

§ 63.7525 What are my monitoring, installation, operation, and maintenance requirements?

(a) If your boiler or process heater is subject to a CO emission limit in Table 1 or 2 or Tables 11 through 15 to this subpart, you must install, operate, and maintain an oxygen analyzer system, as defined in § 63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen (O_2) (or carbon dioxide (CO_2)) according to the procedures in paragraphs (a)(1) through (6) of this section.

(1) Install the CO CEMS including an O_2 (or CO_2) analyzer by the compliance date specified in § 63.7495. The CO and O_2 (or CO_2) levels shall be monitored at the same location at the outlet of the boiler or process heater. An owner or operator may determine compliance with the CO emissions limit using a CO_2 analyzer as the diluent monitor. If a CO_2 analyzer is used as the diluent monitor, EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, for the fuel type(s) being burned in the unit and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to calculate the emissions corrected to 3 percent O_2 using the measured CO_2 percentage, and must also take into account that the 3 percent oxygen correction is to be done on a dry basis. The equations used to calculate the emissions, must also account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. The methodology used to calculate the CO emissions and the methodology used to account for any CO_2 being added to, or removed from the emissions gas stream shall be detailed and approved in the site-specific monitoring plan developed according to § 63.7505(d).

(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Table 1 or 2 or Tables 11 through 15 to this subpart, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B; part 75 of this chapter (if an CO_2 analyzer is used); the site-specific monitoring plan developed according to § 63.7505(d); and the requirements in § 63.7540(a)(8) and this paragraph (a). Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and this paragraph (a) must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Table 1 or 2 or Tables 11 through 15 to this subpart.

(i) You must conduct a performance evaluation of each CO CEMS according to the requirements in § 63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.

(ii) During each relative accuracy test run of the CO CEMS, you must collect emission data for CO concurrently using both the CO CEMS and Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be conducted at representative operating conditions.

(iii) You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.

(iv) Any CO CEMS that does not comply with this paragraph (a) cannot be used to meet any requirement in this subpart to demonstrate compliance with a CO emission limit listed in Table 1 or 2 or Tables 11 through 15 to this subpart.

(v) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(vi) When CO_2 is used to correct CO emissions and CO_2 is measured on a wet basis, if needed, correct for moisture as follows: Install, operate, maintain, and quality assure a continuous moisture monitoring system for measuring and recording the moisture content of the flue gases, in order to correct the measured hourly volumetric flow rates for moisture when calculating CO concentrations. The following continuous moisture monitoring systems are acceptable: a continuous moisture sensor; an oxygen analyzer (or analyzers) capable of measuring O_2 both on a wet basis and on a dry basis; or a stack temperature sensor and a moisture look-up table, *i.e.,* a psychrometric chart (for saturated gas streams following wet scrubbers or other demonstrably saturated gas streams, only). The moisture monitoring system shall include as a component the automated data acquisition and handling system (DAHS) for recording and reporting both the raw data (e.g., hourly average wet-and dry-basis O_2 values) and the hourly average values of the stack gas moisture content derived from those data. When a moisture look-up table is used, the moisture monitoring system

shall be represented as a single component, the certified DAHS, in the monitoring plan for the unit or common stack.

(3) Complete a minimum of one cycle of CO and oxygen (or CO_2) CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen (or CO_2) data concurrently. Collect at least four CO and oxygen (or CO_2) CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

(4) Reduce the CO CEMS data as specified in § 63.8(g)(2).

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen (or corrected to an CO_2 percentage determined to be equivalent to 3 percent oxygen) from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values.

(6) For purposes of collecting CO data, operate the CO CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(7) Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to this subpart.

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (*e.g.,* bag leak detectors, ESP secondary power, and PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS must be expressed as milliamps.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must have a documented detection limit of 0.5 milligram per actual cubic meter, or less.

(2) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Collect PM CPMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d). Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output data collected during all boiler or process heater operating hours (milliamps).

(5) Install, certify, operate, and maintain your PM CEMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(5)(i) through (iv) of this section.

(i) You shall conduct a performance evaluation of the PM CEMS according to the applicable requirements of § 60.8(e), and Performance Specification 11 at 40 CFR part 60, appendix B of this chapter.

(ii) During each PM correlation testing run of the CEMS required by Performance Specification 11 at 40 CFR part 60, appendix B of this chapter, you shall collect PM and oxygen (or carbon dioxide) data concurrently (or within a 30-to 60-minute period) by both the CEMS and conducting performance tests using Method 5 at 40 CFR part 60, appendix A-3 or Method 17 at 40 CFR part 60, appendix A-6 of this chapter.

(iii) You shall perform quarterly accuracy determinations and daily calibration drift tests in accordance with Procedure 2 at 40 CFR part 60, appendix F of this chapter. You must perform Relative Response Audits annually and perform Response Correlation Audits every 3 years.

(iv) Within 60 days after the date of completing each CEMS relative accuracy test audit or performance test conducted to demonstrate compliance with this subpart, you must submit the relative accuracy test audit data and performance test data to the EPA by successfully submitting the data electronically into the EPA's Central Data Exchange by using the Electronic Reporting Tool (see *http://www.epa.gov/ttn/chief/ert/erttool.html/*).

(6) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(7) Collect PM CEMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d).

(8) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all boiler or process heater operating hours.

(c) If you have an applicable opacity operating limit in this rule, and are not otherwise required or elect to install and operate a PM CPMS, PM CEMS, or a bag leak detection system, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (c)(1) through (7) of this section by the compliance date specified in § 63.7495.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in § 63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in § 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in § 63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in § 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of § 63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(d) If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in paragraphs (d)(1) through (5) of this section by the compliance date specified in § 63.7495.

(1) The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.

(2) You must operate the monitoring system as specified in § 63.7535(b), and comply with the data calculation requirements specified in § 63.7535(c).

(3) Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in § 63.7535(d).

(4) You must determine the 30-day rolling average of all recorded readings, except as provided in § 63.7535(c).

(5) You must record the results of each inspection, calibration, and validation check.

(e) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (d) and (e)(1) through (4) of this section.

(1) You must install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.

(3) You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(f) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (d) and (f)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (*e.g.*, PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (*e.g.*, check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(g) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (d) and (g)(1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Calibrate the pH monitoring system in accordance with your monitoring plan and according to the manufacturer's instructions. Clean the pH probe at least once each process operating day. Maintain on-site documentation that your calibration frequency is sufficient to maintain the specified accuracy of your device.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(h) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator (ESP) operated with a wet scrubber, you must meet the requirements in paragraphs (h)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(i) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (d) and (i)(1) through (2) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(j) If you are not required to use a PM CPMS and elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (j)(1) through (6) of this section.

(1) You must install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute PM loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(2) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see § 63.14).

(3) Use a bag leak detection system certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) Use a bag leak detection system equipped with a device to record continuously the output signal from the sensor.

(5) Use a bag leak detection system equipped with a system that will alert plant operating personnel when an increase in relative PM emissions over a preset level is detected. The alert must easily recognizable (e.g., heard or seen) by plant operating personnel.

(6) Where multiple bag leak detectors are required, the system's instrumentation and alert may be shared among detectors.

(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.

(l) For each unit for which you decide to demonstrate compliance with the mercury or HCl emissions limits in Table 1 or 2 or Tables 11 through 15 to this subpart by use of a CEMS for mercury or HCl, you must install, certify, maintain, and operate a CEMS measuring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (l)(1) through (8) of this section. For HCl, this option for an affected unit takes effect on the date of approval of a site-specific monitoring plan.

(1) Notify the Administrator one month before starting use of the CEMS, and notify the Administrator one month before stopping use of the CEMS.

(2) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in § 63.7540(a)(14) for a mercury CEMS and § 63.7540(a)(15) for a HCl CEMS.

(3) For a new unit, you must complete the initial performance evaluation of the CEMS by the latest of the dates specified in paragraph (l)(3)(i) through (iii) of this section.

(i) No later than July 30, 2013.

(ii) No later 180 days after the date of initial startup.

(iii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(4) For an existing unit, you must complete the initial performance evaluation by the latter of the two dates specified in paragraph (l)(4)(i) and (ii) of this section.

(i) No later than July 29, 2016.

(ii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(5) Compliance with the applicable emissions limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emissions rates using the continuous monitoring system outlet data. The 30-day rolling arithmetic average emission rate (lb/MMBtu) shall be calculated using the equations in EPA Reference Method 19 at 40 CFR part 60, appendix A-7, but substituting the mercury or HCl concentration for the pollutant concentrations normally used in Method 19.

(6) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis. Collect at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

(7) The one-hour arithmetic averages required shall be expressed in lb/MMBtu and shall be used to calculate the boiler 30-day and 10-day rolling average emissions.

(8) You are allowed to substitute the use of the PM, mercury or HCl CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with the PM,

mercury or HCl emissions limit, and if you are using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, you are allowed to substitute the use of a sulfur dioxide (SO_2) CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with HCl emissions limit.

(m) If your unit is subject to a HCl emission limit in Table 1 or 2 or Tables 11 through 15 to this subpart and you have an acid gas wet scrubber or dry sorbent injection control technology and you elect to use an SO_2 CEMS to demonstrate continuous compliance with the HCl emission limit, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to either part 60 or part 75 of this chapter.

(1) The SO_2 CEMS must be installed by the compliance date specified in § 63.7495.

(2) For on-going quality assurance (QA), the SO_2 CEMS must meet either the applicable daily and quarterly requirements in Procedure 1 of appendix F of part 60 or the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO_2 CEMS has a span value of 30 ppm or less.

(3) For a new unit, the initial performance evaluation shall be completed no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, the initial performance evaluation shall be completed no later than July 29, 2016.

(4) For purposes of collecting SO_2 data, you must operate the SO_2 CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when SO_2 data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(5) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis.

(6) Use only unadjusted, quality-assured SO_2 concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO_2 data and do not use part 75 substitute data values.

§ 63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to § 63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to this subpart. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by § 63.7510(a)(2). If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to § 63.7525.

(b) If you demonstrate compliance through performance stack testing, you must establish each site-specific operating limit in Table 4 to this subpart that applies to you according to the requirements in § 63.7520, Table 7 to this subpart, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to § 63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in § 63.7510(a)(2). (Note that § 63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) You must establish the maximum chlorine fuel input (Clinput) during the initial fuel analysis according to the procedures in paragraphs (b)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (Ci).

(iii) You must establish a maximum chlorine input level using Equation 7 of this section.

$$Clinput = \sum_{i=1}^{n} (Ci \times Qi) \quad \text{(Eq. 7)}$$

Where:

Clinput = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

Ci = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the procedures in paragraphs (b)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Qi) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HGi).

(iii) You must establish a maximum mercury input level using Equation 8 of this section.

$$Mercuryinput = \sum_{i=1}^{n} (HGi \times Qi) \quad \text{(Eq. 8)}$$

Where:

Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

HGi = Arithmetic average concentration of mercury in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content during the initial compliance test. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(3) If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the procedures in paragraphs (b)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSMi).

(iii) You must establish a maximum TSM input level using Equation 9 of this section.

$$TSMinput = \sum_{i=1}^{n} (TSMi \times Qi) \qquad \text{(Eq. 9)}$$

Where:

TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

TSMi = Arithmetic average concentration of TSM in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(4) You must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of this section. As indicated in Table 4 to this subpart, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter.

(i) For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in § 63.7575, as your operating limits during the performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests.

(ii) For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (b)(4)(ii)(A) through (F) of this section.

(A) Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at

the PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(*1*) Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

(*2*) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

(*3*) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(B) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs (b)(4)(ii)(B)(*1*) through (*4*) of this section.

(*1*) Determine your instrument zero output with one of the following procedures:

(*i*) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

(*ii*) Zero point data for *extractive* instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(*iii*) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

(*iv*) If none of the steps in paragraphs (b)(4)(ii)(B)(*1*)(*i*) through (*iii*) of this section are possible, you must use a zero output value provided by the manufacturer.

(*2*) Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\overline{x} = \frac{1}{n}\sum_{i=1}^{n} X_1 \quad \overline{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1 \qquad \text{(Eq. 10)}$$

Where:

X_1 = the PM CPMS data points for the three runs constituting the performance test,

Y_1 = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(*3*) With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$R = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 11)}$$

Where:

R = the relative lb/MMBtu per milliamp for your PM CPMS,

Y_1 = the three run average lb/MMBtu PM concentration,

X_1 = the three run average milliamp output from you PM CPMS, and

z = the milliamp equivalent of your instrument zero determined from (B)(i).

(*4*) Determine your source specific 30-day rolling average operating limit using the lb/MMBtu per milliamp value from Equation 11 in equation 12, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_l = z + \frac{0.75(L)}{R} \qquad \text{(Eq. 12)}$$

Where:

O_l = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.

L = your source emission limit expressed in lb/MMBtu,

z = your instrument zero in milliamps, determined from (B)(i), and

R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

(C) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (b)(4)(ii)(F) of this section.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_1 \qquad \text{(Eq. 13)}$$

Where:

X_1 = the PM CPMS data points for all runs i,

n = the number of data points, and

O_h = your site specific operating limit, in milliamps.

(D) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS

for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new operating hour. Use Equation 14 to determine the 30-day rolling average.

$$30-\text{day} = \frac{\sum_{i=1}^{n} Hpv_i}{n} \qquad \text{(Eq. 14)}$$

Where:

30-day = 30-day average.

Hpvi = is the hourly parameter value for hour i

n = is the number of valid hourly parameter values collected over the previous 30 operating days.

(E) Use EPA Method 5 of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Conduct each test run to collect a minimum sample volume specified in Table 1 or 2 or Tables 11 through 15 to this subpart, as applicable, for determining compliance with a new source limit or an existing source limit. Calculate the average of the results from three runs to determine compliance. You need not determine the PM collected in the impingers ("back half") of the Method 5 particulate sampling train to demonstrate compliance with the PM standards in this subpart. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes.

(F) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.* beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.

(iii) For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in § 63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests.

(iv) For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.)

(v) For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vi) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vii) The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in § 63.7525, and that each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period.

(viii) For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

(ix) The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a SO_2 CEMS is to install and operate the SO_2 according to the requirements in § 63.7525(m) establish a maximum SO_2 emission rate equal to the highest hourly average SO_2 measurement during the most recent three-run performance test for HCl.

(c) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to § 63.7521 and follow the procedures in paragraphs (c)(1) through (5) of this section.

(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.

(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided t-statistic test described in Equation 15 of this section.

$$P90 = mean + (SD \times t) \qquad \text{(Eq. 15)}$$

Where:

P90 = 90th percentile confidence level pollutant concentration, in pounds per million Btu.

Mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu.

SD = Standard deviation of the mean of pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu. SD is calculated as the sample standard deviation divided by the square root of the number of samples.

t = t distribution critical value for 90th percentile ($t_{0.1}$) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a t-Distribution Critical Value Table.

(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 16 of this section must not exceed the applicable emission limit for HCl.

$$HCl = \sum_{i=1}^{n} (Ci90 \times Qi \times 1.028) \qquad \text{(Eq. 16)}$$

Where:

HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.

Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

1.028 = Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 17 of this section must not exceed the applicable emission limit for mercury.

$$Mercury = \sum_{i=1}^{n} (Hgi90 \times Qi) \qquad \text{(Eq. 17)}$$

Where:

Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu.

Hgi90 = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

(5) To demonstrate compliance with the applicable emission limit for TSM for solid or liquid fuels, the TSM emission rate that you calculate for your boiler or process heater from solid fuels using Equation 18 of this section must not exceed the applicable emission limit for TSM.

$$Metals = \sum_{i=1}^{n} (TSM90i \times Qi) \qquad \text{(Eq. 18)}$$

Where:

Metals = TSM emission rate from the boiler or process heater in units of pounds per million Btu.

TSMi90 = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest TSM content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest TSM content.

(d) [Reserved]

(e) You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to this subpart, and that the assessment is an accurate depiction of your facility at

the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.7545(e).

(g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in § 63.7575, you must conduct an initial fuel specification analyses according to § 63.7521(f) through (i) and according to the frequency listed in § 63.7540(c) and maintain records of the results of the testing as outlined in § 63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.

(h) If you own or operate a unit subject to emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart, you must meet the work practice standard according to Table 3 to this subpart. During startup and shutdown, you must only follow the work practice standards according to items 5 and 6 of Table 3 to this subpart.

(i) If you opt to comply with the alternative SO_2 CEMS operating limit in Tables 4 and 8 to this subpart, you may do so only if your affected boiler or process heater:

(1) Has a system using wet scrubber or dry sorbent injection and SO_2 CEMS installed on the unit; and

(2) At all times, you operate the wet scrubber or dry sorbent injection for acid gas control on the unit consistent with § 63.7500(a)(3); and

(3) You establish a unit-specific maximum SO_2 operating limit by collecting the maximum hourly SO_2 emission rate on the SO_2 CEMS during the paired 3-run test for HCl. The maximum SO_2 operating limit is equal to the highest hourly average SO_2 concentration measured during the HCl performance test.

§ 63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?

(a) If you elect to comply with the alternative equivalent output-based emission limits, instead of the heat input-based limits listed in Table 2 or 15 to this subpart, and you want to take credit for implementing energy conservation measures identified in an energy assessment, you may demonstrate compliance using efficiency credits according to the procedures in this section. You may use this compliance approach for an existing affected boiler for demonstrating initial compliance according to § 63.7522(e) and for demonstrating monthly compliance according to § 63.7522(f). Owners or operators using this compliance approach must establish an emissions benchmark, calculate and document the efficiency credits, develop an Implementation Plan, comply with the general reporting requirements, and apply the efficiency credit according to the procedures in paragraphs (b) through (f) of this section. You cannot use this compliance approach for a new or reconstructed affected boiler. Additional guidance from the Department of Energy on efficiency credits is available at *https://www.epa.gov/ttn/atw/boiler/boilerpg.html*.

(b) For each existing affected boiler for which you intend to apply emissions credits, establish a benchmark from which emission reduction credits may be generated by determining the actual annual fuel heat input to the affected boiler before initiation of an energy conservation activity to reduce energy demand (*i.e.,* fuel usage) according to paragraphs (b)(1) through (4) of this section. The benchmark shall be expressed in trillion Btu per year heat input.

(1) The benchmark from which efficiency credits may be generated shall be determined by using the most representative, accurate, and reliable process available for the source. The benchmark shall be established for a one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

(2) Determine the starting point from which to measure progress. Inventory all fuel purchased and generated on-site (off-gases, residues) in physical units (MMBtu, million cubic feet, etc.).

(3) Document all uses of energy from the affected boiler. Use the most recent data available.

(4) Collect non-energy related facility and operational data to normalize, if necessary, the benchmark to current operations, such as building size, operating hours, etc. If possible, use actual data that are current and timely rather than estimated data.

(c) Efficiency credits can be generated if the energy conservation measures were implemented after January 1, 2008 and if sufficient information is available to determine the appropriate value of credits.

(1) The following emission points cannot be used to generate efficiency credits:

(i) Energy conservation measures implemented on or before January 1, 2008, unless the level of energy demand reduction is increased after January 1, 2008, in which case credit will be allowed only for change in demand reduction achieved after January 1, 2008.

(ii) Efficiency credits on shut-down boilers. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to energy conservation measures identified in the energy assessment. In this case, the bench established for the affected boiler to which the credits from the shutdown will be applied must be revised to include the benchmark established for the shutdown boiler.

(2) For all points included in calculating emissions credits, the owner or operator shall:

(i) Calculate annual credits for all energy demand points. Use Equation 19 to calculate credits. Energy conservation measures that meet the criteria of paragraph (c)(1) of this section shall not be included, except as specified in paragraph (c)(1)(i) of this section.

(3) Credits are generated by the difference between the benchmark that is established for each affected boiler, and the actual energy demand reductions from energy conservation measures implemented after January 1, 2008. Credits shall be calculated using Equation 19 of this section as follows:

(i) The overall equation for calculating credits is:

$$ECredits = \left(\sum_{i=1}^{n} EIS_{iactual} \right) \div EI_{baseline} \qquad \text{(Eq. 19)}$$

Where:

ECredits = Energy Input Savings for all energy conservation measures implemented for an affected boiler, expressed as a decimal fraction of the baseline energy input.

$EIS_{iactual}$ = Energy Input Savings for each energy conservation measure, i, implemented for an affected boiler, million Btu per year.

$EI_{baseline}$ = Energy Input baseline for the affected boiler, million Btu per year.

n = Number of energy conservation measures included in the efficiency credit for the affected boiler.

(ii) [Reserved]

(d) The owner or operator shall develop, and submit for approval upon request by the Administrator, an Implementation Plan containing all of the information required in this paragraph for all boilers to be included in an efficiency credit approach. The Implementation Plan shall identify all existing affected boilers to be included in applying the efficiency credits. The Implementation Plan shall include a description of the energy conservation measures implemented and the energy savings generated from each measure and an explanation of the criteria used for determining that savings. If requested, you must submit the implementation plan for efficiency credits to the

Administrator for review and approval no later than 180 days before the date on which the facility intends to demonstrate compliance using the efficiency credit approach.

(e) The emissions rate as calculated using Equation 20 in paragraph (f) of this section from each existing boiler participating in the efficiency credit option must be in compliance with the limits in Table 2 or 15 to this subpart at all times the affected unit is subject to numeric emission limits, following the compliance date specified in § 63.7495.

(f) You must use Equation 20 of this paragraph (f) to demonstrate initial compliance by demonstrating that the emissions from the affected boiler participating in the efficiency credit compliance approach do not exceed the emission limits in Table 2 or 15 to this subpart.

Equation 20 to paragraph (f)

$$E_{adj} = E_m \times (1 - ECredits) \quad \text{(Eq. 20)}$$

Where:

E_{adj} = Emission level adjusted by applying the efficiency credits earned, lb per million Btu steam output (or lb per MWh) for the affected boiler.

E_m = Emissions measured during the performance test, lb per million Btu steam output (or lb per MWh) for the affected boiler.

ECredits = Efficiency credits from Equation 19 to paragraph (c)(3)(i) of this section for the affected boiler.

(g) As part of each compliance report submitted as required under § 63.7550, you must include documentation that the energy conservation measures implemented continue to generate the credit for use in demonstrating compliance with the emission limits.

Continuous Compliance Requirements

§ 63.7535 Is there a minimum amount of monitoring data I must obtain?

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by § 63.7505(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see § 63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods of startup and shutdown, when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your semi-annual report.

§ 63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 15 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§ 63.7 and 63.7510, whichever date comes first, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of this subpart except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

(2) As specified in § 63.7555(d), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Equal to or lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Equal to or lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must recalculate the HCl emission rate using Equation 16 of § 63.7530 according to paragraphs (a)(3)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the HCl emission rate.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 16 of § 63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 7 of § 63.7530. If the results of recalculating the maximum chlorine input using Equation 7 of § 63.7530 are greater than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also

establish new operating limits based on this performance test according to the procedures in § 63.7530(b). In recalculating the maximum chlorine input and establishing the new operating limits, you are not required to conduct fuel analyses for and include the fuels described in § 63.7510(a)(2)(i) through (iii).

(5) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 17 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 17 of § 63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 8 of § 63.7530. If the results of recalculating the maximum mercury input using Equation 8 of § 63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(7) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action.

(8) To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Table 1 or 2 or Tables 11 through 15 to this subpart, you must meet the requirements in paragraphs (a)(8)(i) through (iv) of this section.

(i) Continuously monitor CO according to §§ 63.7525(a) and 63.7535.

(ii) Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Table 1 or 2 or Tables 11 through 15 to this subpart at all times the affected unit is subject to numeric emission limits.

(iii) Keep records of CO levels according to § 63.7555(b).

(iv) You must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective actions necessary to return the CO CEMS to operation consistent with your site-specific monitoring plan.

(9) The owner or operator of a boiler or process heater using a PM CPMS or a PM CEMS to meet requirements of this subpart shall install, certify (PM CEMS only), operate, and maintain the PM CPMS or PM CEMS in accordance with your site-specific monitoring plan as required in § 63.7505(d).

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in § 63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(11) If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of this section), you must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance.

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in § 63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

(14) If you are using a CEMS measuring mercury emissions to meet requirements of this subpart you must install, certify, operate, and maintain the mercury CEMS as specified in paragraphs (a)(14)(i) and (ii) of this section.

(i) Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in § 63.7545(e)(2)(iii) for mercury CEMS or it must be 720 hours if you specified a 720 hour basis in § 63.7545(e)(2)(iii) for mercury CEMS. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a mercury CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

(15) If you are using a CEMS to measure HCl emissions to meet requirements of this subpart, you must install, certify, operate, and maintain the HCl CEMS as specified in paragraphs (a)(15)(i) and (ii) of this section. This option for an affected unit takes effect on the date of approval of a site-specific monitoring plan.

(i) Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in § 63.7545(e)(2)(iii) for HCl CEMS or it must be 720 hours if you specified a 720 hour basis in § 63.7545(e)(2)(iii) for HCl CEMS. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a HCl CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable performance specification of 40 CFR part 60, appendix B, and the quality assurance procedures of 40 CFR part 60, appendix F.

(16) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 9 of § 63.7530. If the results of recalculating the maximum TSM input using Equation 9 of § 63.7530 are higher than the maximum total selected input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(17) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 18 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 18 of § 63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(18) If you demonstrate continuous PM emissions compliance with a PM CPMS you will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using the test method criteria in Table 5 of this subpart. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(i) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis.

(ii) For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, you must:

(A) Within 48 hours of the deviation, visually inspect the air pollution control device (APCD);

(B) If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(C) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph.

(iii) PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of this subpart.

(19) If you choose to comply with the PM filterable emissions limit by using PM CEMS you must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (a)(19)(i) through (vii) of this section. The compliance limit will be expressed as a 30-day rolling average of the numerical emissions limit value applicable for your unit in Table 1 or 2 or Tables 11 through 15 to this subpart.

(i) Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11 - Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using test criteria outlined in Table V of this rule. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

(ii) Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2 - Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.

(A) You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.

(B) You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.

(iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (v) of this section.

(iv) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours.

(v) You must collect data using the PM CEMS at all times the unit is operating and at the intervals specified this paragraph (a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(vi) You must use all the data collected during all boiler or process heater operating hours in assessing the compliance with your operating limit except:

(A) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in your annual deviation report;

(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in your annual deviation report;

(C) Any data recorded during periods of startup or shutdown.

(vii) You must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 15 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in § 63.7550.

(c) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must follow the sampling frequency specified in paragraphs (c)(1) through (4) of this section and conduct this sampling according to the procedures in § 63.7521(f) through (i).

(1) If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in § 63.7575, you do not need to conduct further sampling.

(2) If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification as defined in § 63.7575, you will conduct semi-annual sampling. If 6 consecutive semi-annual fuel analyses demonstrate 50 percent or less of the mercury specification, you do not need to conduct further sampling. If any semi-annual sample exceeds 75 percent of the mercury specification, you must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75 percent of the compliance level.

(3) If the initial mercury constituents are greater than 75 percent of the mercury specification as defined in § 63.7575, you will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75 percent or less of the mercury specification, you may decrease the fuel analysis frequency to semi-annual for that fuel.

(4) If the initial sample exceeds the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting this fuel is not part of the unit designed to burn gas 1 subcategory and must be in compliance with the emission and operating limits for the appropriate subcategory. You may elect to conduct additional monthly sampling while complying with these emissions and operating limits to demonstrate that the fuel qualifies as another gas 1 fuel. If 12 consecutive monthly fuel analyses samples are at or below the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting the fuel can elect to switch back into the unit designed to burn gas 1 subcategory until the mercury specification is exceeded.

(d) For startup and shutdown, you must meet the work practice standards according to items 5 and 6 of Table 3 of this subpart.

§ 63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (5) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in § 63.7522(f) and (g).

(2) You must maintain the applicable opacity limit according to paragraphs (a)(2)(i) and (ii) of this section.

(i) For each existing unit participating in the emissions averaging option that is equipped with a dry control system and not vented to a common stack, maintain opacity at or below the applicable limit.

(ii) For each group of units participating in the emissions averaging option where each unit in the group is equipped with a dry control system and vented to a common stack that does not receive emissions from non-affected units, maintain opacity at or below the applicable limit at the common stack.

(3) For each existing unit participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 30-day rolling average parameter values at or above the operating limits established during the most recent performance test.

(4) For each existing unit participating in the emissions averaging option that has an approved alternative operating parameter, maintain the 30-day rolling average parameter values consistent with the approved monitoring plan.

(5) For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (5) of this section is a deviation.

Notification, Reports, and Records

§ 63.7545 What notifications must I submit and when?

(a) You must submit to the Administrator all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) As specified in § 63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(c) As specified in § 63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source. For a new or reconstructed affected source that has reclassified to major source status, you must submit an Initial Notification not later 120 days after the source becomes subject to this subpart.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

(e) If you are required to conduct an initial compliance demonstration as specified in § 63.7530, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to § 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8) of this section, as applicable. If you are not required to conduct an initial compliance demonstration as specified in § 63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) of this section and must be submitted within 60 days of the compliance date specified at § 63.7495(b).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under § 241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of § 241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(2) Summary of the results of all performance tests and fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits, and including:

(i) Identification of whether you are complying with the PM emission limit or the alternative TSM emission limit.

(ii) Identification of whether you are complying with the output-based emission limits or the heat input-based (i.e., lb/MMBtu or ppm) emission limits,

(iii) Identification of whether you are complying the arithmetic mean of all valid hours of data from the previous 30 operating days or of the previous 720 hours. This identification shall be specified separately for each operating parameter.

(3) A summary of the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in Table 1 or 2 or Tables 11 through 15 to this subpart, if you are not using a CO CEMS to demonstrate compliance.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing, a CEMS, or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging and identification of whether you plan to demonstrate compliance by using efficiency credits through energy conservation:

(i) If you plan to demonstrate compliance by emission averaging, report the emission level that was being achieved or the control technology employed on January 31, 2013.

(ii) [Reserved]

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

(8) In addition to the information required in § 63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) "This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in § 63.7540(a)(10)(i) through (vi)."

(ii) "This facility has had an energy assessment performed according to § 63.7530(e)."

(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: "No secondary materials that are solid waste were combusted in any affected unit."

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in § 63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in § 63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

(g) If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) or process heater(s) that will commence burning solid waste, and the date of the notice.

(2) The currently applicable subcategories under this subpart.

(3) The date on which you became subject to the currently applicable emission limits.

(4) The date upon which you will commence combusting solid waste.

(h) If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date upon which the fuel switch or physical change occurred.

§ 63.7550 What reports must I submit and when?

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance

report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in § 63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in § 63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in § 63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in § 63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in § 63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c)(5)(iv) of this section for limited-use boiler or process heater.

(2) If you are complying with the fuel analysis you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii), (vi), (x), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(3) If you are complying with the applicable emissions limit with performance testing you must submit a compliance report with the information in (c)(5)(i) through (iii), (vi), (vii), (viii), (ix), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(4) If you are complying with an emissions limit using a CMS the compliance report must contain the information required in paragraphs (c)(5)(i) through (iii), (v), (vi), (xi) through (xiii), (xv) through (xviii), and paragraph (e) of this section.

(5) (i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

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

(iv) The total operating time during the reporting period.

(v) If you use a CMS, including CEMS, COMS, or CPMS, you must include the monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.

(vi) The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

(vii) If you are conducting performance tests once every 3 years consistent with § 63.7515(b) or (c), the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

(viii) A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of § 63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 16 of § 63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of § 63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 17 of § 63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of § 63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 18 of § 63.7530, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(ix) If you wish to burn a new type of fuel in an individual boiler or process heater subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of § 63.7530 or the maximum mercury input operating limit using Equation 8 of § 63.7530, or the maximum TSM input operating limit using Equation 9 of § 63.7530 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(x) A summary of any monthly fuel analyses conducted to demonstrate compliance according to §§ 63.7521 and 63.7530 for individual boilers or process heaters subject to emission limits, and any fuel specification analyses conducted according to §§ 63.7521(f) and 63.7530(g).

(xi) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

(xii) If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in § 63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.

(xiii) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with § 63.7500(a)(3), including actions taken to correct the malfunction.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xv) If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in § 63.7545(e)(5)(i).

(xvi) For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values for CEMS (CO, HCl, SO_2, and mercury), 10 day rolling average values for CO CEMS when the limit is expressed as a 10 day instead of 30 day rolling average, and the PM CPMS data.

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

(xviii) For each instance of startup or shutdown include the information required to be monitored, collected, or recorded according to the requirements of § 63.7555(d).

(d) For each deviation from an emission limit or operating limit in this subpart that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or operating limit, or from the work practice standards for periods if startup and shutdown, the compliance report must additionally contain the information required in paragraphs (d)(1) through (3) of this section.

(1) A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.

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

(3) If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

(e) For each deviation from an emission limit, operating limit, and monitoring requirement in this subpart occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (e)(1) through (9) of this section. This includes any deviations from your site-specific monitoring plan as required in § 63.7505(d).

(1) The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out of control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped.

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

(6) A characterization of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS's downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(8) A brief description of the source for which there was a deviation.

(9) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(f)-(g) [Reserved]

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) Within 60 days after the date of completing each performance test (as defined in § 63.2) required by this subpart, you must submit the results of the performance tests, including any fuel analyses, following the procedure specified in either paragraph (h)(1)(i) or (ii) of this section.

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (*http://www.epa.gov/ttn/chief/ert/index.html*), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*).) Performance test data must be submitted in a file format generated through use of the EPA's ERT or an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 63.13.

(2) Within 60 days after the date of completing each CEMS performance evaluation (as defined in 63.2), you must submit the results of the performance evaluation following the procedure specified in either paragraph (h)(2)(i) or (ii) of this section.

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being transmitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham,

NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in § 63.13.

(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in § 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

§ 63.7555 What records must I keep?

(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

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

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in § 63.10(b)(2)(viii).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

(b) For each CEMS, COMS, and continuous monitoring system you must keep records according to paragraphs (b)(1) through (5) of this section.

(1) Records described in § 63.10(b)(2)(vii) through (xi).

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in § 63.6(h)(7)(i) and (ii).

(3) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(4) Request for alternatives to relative accuracy test for CEMS as required in § 63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you.

(d) For each boiler or process heater subject to an emission limit in Table 1 or 2 or Tables 11 through 15 to this subpart, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to § 241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4) of this chapter, you must keep

records as to how the operations that produced the fuel satisfy the definition of processing in § 241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under § 241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under § 241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this paragraph (d)(2).

(3) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of § 63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 16 of § 63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(4) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of § 63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 17 of § 63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(5) If, consistent with § 63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 15 to this subpart, less than the applicable emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(6) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.

(7) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in § 63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.

(8) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of § 63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 18 of § 63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(9) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(10) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(11) For each startup period, for units selecting paragraph (2) of the definition of "startup" in § 63.7575 you must maintain records of the time that clean fuel combustion begins; the time when you start feeding fuels that are not clean fuels; the time when useful thermal energy is first supplied; and the time when the PM controls are engaged.

(12) If you choose to rely on paragraph (2) of the definition of "startup" in § 63.7575, for each startup period, you must maintain records of the hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (*e.g.,* CEMS, PM CPMS, COMS, ESP total secondary electric power input, scrubber pressure drop, scrubber liquid flow rate) collected during each startup period to confirm that the control devices are engaged. In addition, if compliance with the PM emission limit is demonstrated using a PM control device, you must maintain records as specified in paragraphs (d)(12)(i) through (iii) of this section.

(i) For a boiler or process heater with an electrostatic precipitator, record the number of fields in service, as well as each field's secondary voltage and secondary current during each hour of startup.

(ii) For a boiler or process heater with a fabric filter, record the number of compartments in service, as well as the differential pressure across the baghouse during each hour of startup.

(iii) For a boiler or process heater with a wet scrubber needed for filterable PM control, record the scrubber's liquid flow rate and the pressure drop during each hour of startup.

(13) If you choose to use paragraph (2) of the definition of "startup" in § 63.7575 and you find that you are unable to safely engage and operate your PM control(s) within 1 hour of first firing of non-clean fuels, you may choose to rely on paragraph (1) of definition of "startup" in § 63.7575 or you may submit to the delegated permitting authority a request for a variance with the PM controls requirement, as described below.

(i) The request shall provide evidence of a documented manufacturer-identified safety issue.

(ii) The request shall provide information to document that the PM control device is adequately designed and sized to meet the applicable PM emission limit.

(iii) In addition, the request shall contain documentation that:

(A) The unit is using clean fuels to the maximum extent possible to bring the unit and PM control device up to the temperature necessary to alleviate or prevent the identified safety issues prior to the combustion of primary fuel;

(B) The unit has explicitly followed the manufacturer's procedures to alleviate or prevent the identified safety issue; and

(C) Identifies with specificity the details of the manufacturer's statement of concern.

(iv) You must comply with all other work practice requirements, including but not limited to data collection, recordkeeping, and reporting requirements.

(e) If you elect to average emissions consistent with § 63.7522, you must additionally keep a copy of the emission averaging implementation plan required in § 63.7522(g), all calculations required under § 63.7522, including monthly records of heat input or steam generation, as applicable, and monitoring records consistent with § 63.7541.

(f) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to § 63.7533, you must keep a copy of the Implementation Plan required in § 63.7533(d) and copies of all data and calculations used to establish credits according to § 63.7533(b), (c), and (f).

(g) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must maintain monthly records (or at the frequency required by § 63.7540(c)) of the calculations and results of the fuel specification for mercury in Table 6.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

§ 63.7560 In what form and how long must I keep my records?

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

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

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records off site for the remaining 3 years.

Other Requirements and Information

§ 63.7565 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.7570 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the EPA, or an Administrator such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (4) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the emission limits and work practice standards in § 63.7500(a) and (b) under § 63.6(g), except as specified in § 63.7555(d)(13).

(2) Approval of major change to test methods in Table 5 to this subpart under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90, and alternative analytical methods requested under § 63.7521(b)(2).

(3) Approval of major change to monitoring under § 63.8(f) and as defined in § 63.90, and approval of alternative operating parameters under §§ 63.7500(a)(2) and 63.7522(g)(2).

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

§ 63.7575 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2 (the General Provisions), and in this section as follows:

10-day rolling average means the arithmetic mean of the previous 240 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality

control activities, and periods when this unit is not operating. The 240 hours should be consecutive, but not necessarily continuous if operations were intermittent.

12-month rolling average means the arithmetic mean of the previous 12 months of valid fuel analysis data. The 12 months should be consecutive, but not necessarily continuous if operations were intermittent.

30-day rolling average means the arithmetic mean of the previous 720 hours of valid CO CEMS data. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent. For parameters other than CO, 30-day rolling average means either the arithmetic mean of all valid hours of data from 30 successive operating days or the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating.

Annual capacity factor means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

Annual heat input means the heat input for the 12 months preceding the compliance demonstration.

Average annual heat input rate means total heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

Bag leak detection system means a group of instruments that are capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.,* baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Benchmark means the fuel heat input for a boiler or process heater for the one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

Biodiesel means a mono-alkyl ester derived from biomass and conforming to ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (incorporated by reference, see § 63.14).

Biomass or bio-based solid fuel means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (*e.g.,* trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.,* almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

Blast furnace gas fuel-fired boiler or process heater means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total annual gas volume from blast furnace gas.

Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers are excluded from this definition.

Boiler system means the boiler and associated components, such as, the feed water system, the combustion air system, the fuel system (including burners), blowdown system, combustion control systems, steam systems, and condensate return systems.

Calendar year means the period between January 1 and December 31, inclusive, for a given year.

Clean dry biomass means any biomass-based solid fuel that have not been painted, pigment-stained, or pressure treated, does not contain contaminants at concentrations not normally associated with virgin biomass materials and has a moisture content of less than 20 percent and is not a solid waste.

Coal means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by ASTM D388 (incorporated by reference, see § 63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of "coal" includes synthetic fuels derived from coal, including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (6,000 Btu per pound) on a dry basis.

Commercial/institutional boiler means a boiler used in commercial establishments or institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, governmental buildings, hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

Common stack means the exhaust of emissions from two or more affected units through a single flue. Affected units with a common stack may each have separate air pollution control systems located before the common stack, or may have a single air pollution control system located after the exhausts come together in a single flue.

Cost-effective energy conservation measure means a measure that is implemented to improve the energy efficiency of the boiler or facility that has a payback (return of investment) period of 2 years or less.

Daily block average means the arithmetic mean of all valid emission concentrations or parameter levels recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown or downtime.

Deviation.

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

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

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

(2) A deviation is not always a violation.

Dioxins/furans means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see § 63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see § 60.14).

Dry scrubber means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder

material. Sorbent injection systems used as control devices in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

Dutch oven means a unit having a refractory-walled cell connected to a conventional boiler setting. Fuel materials are introduced through an opening in the roof of the dutch oven and burn in a pile on its floor. Fluidized bed boilers are not part of the dutch oven design category.

Efficiency credit means emission reductions above those required by this subpart. Efficiency credits generated may be used to comply with the emissions limits. Credits may come from pollution prevention projects that result in reduced fuel use by affected units. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to implementation of the energy conservation measures identified in the energy assessment.

Electric utility steam generating unit (EGU) means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit. To be "capable of combusting" fossil fuels, an EGU would need to have these fuels allowed in their operating permits and have the appropriate fuel handling facilities on-site or otherwise available (e.g., coal handling equipment, including coal storage area, belts and conveyers, pulverizers, etc.; oil storage facilities). In addition, fossil fuel-fired EGU means any EGU that fired fossil fuel for more than 10.0 percent of the average annual heat input in any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after April 16, 2012.

Electrostatic precipitator (ESP) means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is usually a dry control system.

Energy assessment means the following for the emission units covered by this subpart:

(1) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of less than 0.3 trillion Btu (TBtu) per year will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (*e.g.,* steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

(2) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of 0.3 to 1.0 TBtu/year will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 33 percent of the energy (*e.g.,* steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing a 24-hour on-site energy assessment.

(3) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (*e.g.,* steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) and process heater(s) energy production in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (*e.g.,* product X manufacturing area; product Y drying area; Building Z).

Energy management practices means the set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility.

Energy management program means a program that includes a set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility. Facilities may establish their program through energy management systems compatible with ISO 50001.

Energy use system includes the following systems located on-site that use energy (steam, hot water, or electricity) provided by the affected boiler or process heater: process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning systems; hot water systems; building envelop; and lighting; or other systems that use steam, hot water, process heat, or electricity provided by the affected boiler or process heater. Energy use systems are only those systems using energy clearly produced by affected boilers and process heaters.

Equivalent means the following only as this term is used in Table 6 to this subpart:

(1) An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

(2) An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.

(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining metals (especially the mercury, selenium, or arsenic) using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing these metals. On the other hand, if metals analysis is done on an “as received” basis, a separate aliquot can be dried to determine moisture content and the metals concentration mathematically adjusted to a dry basis.

(6) An equivalent pollutant (mercury, HCl) determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for the pollutant and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 6 to this subpart for the same purpose.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse. A fabric filter is a dry control system.

Federally enforceable means all limitations and conditions that are enforceable by the EPA Administrator, including, but not limited to, the requirements of 40 CFR parts 60, 61, 63, and 65, requirements within any applicable state implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed boiler means a boiler utilizing a fluidized bed combustion process that is not a pulverized coal boiler.

Fluidized bed boiler with an integrated fluidized bed heat exchanger means a boiler utilizing a fluidized bed combustion where the entire tube surface area is located outside of the furnace section at the exit of the cyclone section and exposed to the flue gas stream for conductive heat transfer. This design applies only to boilers in the unit designed to burn coal/solid fossil fuel subcategory that fire coal refuse.

Fluidized bed combustion means a process where a fuel is burned in a bed of granulated particles, which are maintained in a mobile suspension by the forward flow of air and combustion products.

Fossil fuel means natural gas, oil, coal, and any form of solid, liquid, or gaseous fuel derived from such material.

Fuel cell means a boiler type in which the fuel is dropped onto suspended fixed grates and is fired in a pile. The refractory-lined fuel cell uses combustion air preheating and positioning of secondary and tertiary air injection ports to improve boiler efficiency. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, and suspension burners are not part of the fuel cell subcategory.

Fuel type means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

Gaseous fuel includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas and process gases that are regulated under another subpart of this part, or part 60, part 61, or part 65 of this chapter, are exempted from this definition.

Heat input means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

Heavy liquid includes residual oil and any other liquid fuel not classified as a light liquid.

Hourly average means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass/bio-based solid fuel and is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on demand hot water.

Hybrid suspension grate boiler means a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis as demonstrated by monthly fuel analysis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Light liquid includes distillate oil, biodiesel, or vegetable oil.

Limited-use boiler or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable annual capacity factor of no more than 10 percent.

Liquid fuel includes, but is not limited to, light liquid, heavy liquid, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, biodiesel, and vegetable oil.

Load fraction means the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (*e.g.,* for 50 percent load the load fraction is 0.5). For boilers and process heaters that co-fire natural gas or refinery gas with a solid or liquid fuel, the load fraction is determined by the actual heat input of the solid or liquid fuel divided by heat input of the solid or liquid fuel fired during the performance test (*e.g.,* if the performance test was conducted at 100 percent solid fuel firing, for 100 percent load firing 50 percent solid fuel and 50 percent natural gas the load fraction is 0.5).

Major source for oil and natural gas production facilities, as used in this subpart, shall have the same meaning as in § 63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment, as defined in this section), and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

Metal process furnaces are a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, preheat furnaces, reheat furnaces, aging furnaces, heat treat furnaces, and homogenizing furnaces.

Million Btu (MMBtu) means one million British thermal units.

Minimum activated carbon injection rate means load fraction multiplied by the lowest hourly average activated carbon injection rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum oxygen level means the lowest hourly average oxygen level measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum pressure drop means the lowest hourly average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum scrubber effluent pH means the lowest hourly average sorbent liquid pH measured at the inlet to the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

Minimum scrubber liquid flow rate means the lowest hourly average liquid flow rate (e.g., to the PM scrubber or to the acid gas scrubber) measured according to Table 7 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum scrubber pressure drop means the lowest hourly average scrubber pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum sorbent injection rate means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion not using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, the lowest average ratio of sorbent to sulfur measured during the most recent performance test.

Minimum total secondary electric power means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined in ASTM D1835 (incorporated by reference, see § 63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler or process heater unit. It is not necessary for fuel to be combusted for the entire 24-hour period. For calculating rolling average emissions, an operating day does not include the hours of operation during startup or shutdown.

Other combustor means a unit designed to burn solid fuel that is not classified as a dutch oven, fluidized bed, fuel cell, hybrid suspension grate boiler, pulverized coal boiler, stoker, sloped grate, or suspension boiler as defined in this subpart.

Other gas 1 fuel means a gaseous fuel that is not natural gas or refinery gas and does not exceed a maximum mercury concentration of 40 micrograms/cubic meters of gas.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems. The source owner or operator must install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating load range. A typical system consists of a flue gas oxygen and/or CO monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

Particulate matter (PM) means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an approved alternative method.

Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

Pile burner means a boiler design incorporating a design where the anticipated biomass fuel has a high relative moisture content. Grates serve to support the fuel, and underfire air flowing up through the grates provides oxygen for combustion, cools the grates, promotes turbulence in the fuel bed, and fires the fuel. The most common form of pile burning is the dutch oven.

Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.

Pulverized coal boiler means a boiler in which pulverized coal or other solid fossil fuel is introduced into an air stream that carries the coal to the combustion chamber of the boiler where it is fired in suspension.

Qualified energy assessor means:

(1) Someone who has demonstrated capabilities to evaluate energy savings opportunities for steam generation and major energy using systems, including, but not limited to:

(i) Boiler combustion management.

(ii) Boiler thermal energy recovery, including

(A) Conventional feed water economizer,

(B) Conventional combustion air preheater, and

(C) Condensing economizer.

(iii) Boiler blowdown thermal energy recovery.

(iv) Primary energy resource selection, including

(A) Fuel (primary energy source) switching, and

(B) Applied steam energy versus direct-fired energy versus electricity.

(v) Insulation issues.

(vi) Steam trap and steam leak management.

(vi) Condensate recovery.

(viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

(i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.

(ii) Familiarity with operating and maintenance practices for steam or process heating systems.

(iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.

(iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.

(v) Boiler-steam turbine cogeneration systems.

(vi) Industry specific steam end-use systems.

Refinery gas means any gas that is generated at a petroleum refinery and is combusted. Refinery gas includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. Refinery gas includes gases generated from other facilities when that gas is combined and combusted in any proportion with gas generated at a refinery.

Regulated gas stream means an offgas stream that is routed to a boiler or process heater for the purpose of achieving compliance with a standard under another subpart of this part or part 60, part 61, or part 65 of this chapter.

Residential boiler means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families; or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, *see* § 63.14(b)).

Responsible official means responsible official as defined in § 70.2.

Rolling average means the average of all data collected during the applicable averaging period. For demonstration of compliance with a CO CEMS-based emission limit based on CO concentration a 30-day (10-day) rolling average is comprised of the average of all the hourly average concentrations over the previous 720 (240) operating hours calculated each operating day. To demonstrate compliance on a 30-day rolling average basis for parameters other than CO, you must indicate the basis of the 30-day rolling average period you are using for compliance, as discussed in § 63.7545(e)(2)(iii). If you indicate the 30 operating day basis, you must calculate a new average value each operating day and shall include the measured hourly values for the preceding 30 operating days. If you select the 720 operating hours basis, you must average of all the hourly average concentrations over the previous 720 operating hours calculated each operating day.

Secondary material means the material as defined in § 241.2 of this chapter.

Shutdown means the period in which cessation of operation of a boiler or process heater is initiated for any purpose. Shutdown begins when the boiler or process heater no longer supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer supplies useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in the boiler or process heater.

Sloped grate means a unit where the solid fuel is fed to the top of the grate from where it slides downwards; while sliding the fuel first dries and then ignites and burns. The ash is deposited at the bottom of the grate. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a sloped grate design.

Solid fossil fuel includes, but is not limited to, coal, coke, petroleum coke, and tire derived fuel.

Solid fuel means any solid fossil fuel or biomass or bio-based solid fuel.

Startup means:

(1) Either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the useful thermal energy from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose, or

(2) The period in which operation of a boiler or process heater is initiated for any purpose. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier.

Steam output means:

(1) For a boiler that produces steam for process or heating only (no power generation), the energy content in terms of MMBtu of the boiler steam output,

(2) For a boiler that cogenerates process steam and electricity (also known as combined heat and power), the total energy output, which is the sum of the energy content of the steam exiting the turbine and sent to process in MMBtu and the energy of the electricity generated converted to MMBtu at a rate of 10,000 Btu per kilowatt-hour generated (10 MMBtu per megawatt-hour), and

(3) For a boiler that generates only electricity, the alternate output-based emission limits would be the appropriate emission limit from Table 1, 2, 14, or 15 to this subpart in units of pounds per million Btu heat input (lb per MWh).

(4) For a boiler that performs multiple functions and produces steam to be used for any combination of paragraphs (1), (2), and (3) of this definition that includes electricity generation of paragraph (3) of this definition, the total energy output, in terms of MMBtu of steam output, is the sum of the energy content of steam sent directly to the process and/or used for heating (S_1), the energy content of turbine steam sent to process plus energy in electricity according to paragraph (2) of this definition (S_2), and the energy content of electricity generated by a electricity only turbine as paragraph (3) of this definition (MW_3) and would be calculated using Equation 1 to this definition. In the case of boilers supplying steam to one or more common headers, S_1, S_2, and $MW_{(3)}$ for each boiler would be calculated based on its (steam energy) contribution (fraction of total steam energy) to the common header.

Equation 1 to the definition *Steam Output*

$$SO_M = S_1 + S_2 + (MW_{(3)}\ x\ CFn) \qquad \text{(Eq. 1)}$$

Where:

SO_M = Total steam output for multi-function boiler, MMBtu.

S_1 = Energy content of steam sent directly to the process and/or used for heating, MMBtu.

S_2 = Energy content of turbine steam sent to the process plus energy in electricity according to paragraph (2) of this definition, MMBtu.

$MW_{(3)}$ = Electricity generated according to paragraph (3) of this definition, MWh.

CFn = Conversion factor for the appropriate subcategory for converting electricity generated according to paragraph (3) of this definition to equivalent steam energy, MMBtu/MWh.

CFn for emission limits for boilers in the unit designed to burn solid fuel subcategory = 10.8.

CFn PM and CO emission limits for boilers in one of the subcategories of units designed to burn coal = 11.7.

CFn PM and CO emission limits for boilers in one of the subcategories of units designed to burn biomass = 12.1.

CFn for emission limits for boilers in one of the subcategories of units designed to burn liquid fuel = 11.2.

CFn for emission limits for boilers in the unit designed to burn gas 2 (other) subcategory = 6.2.

Stoker means a unit consisting of a mechanically operated fuel feeding mechanism, a stationary or moving grate to support the burning of fuel and admit under-grate air to the fuel, an overfire air system to complete combustion, and an ash discharge system. This definition of stoker includes air swept stokers. There are two general types of stokers: Underfeed and overfeed. Overfeed stokers include mass feed and spreader stokers. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a stoker design.

Stoker/sloped grate/other unit designed to burn kiln dried biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and is not in the stoker/sloped grate/other units designed to burn wet biomass subcategory.

Stoker/sloped grate/other unit designed to burn wet biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and any of the biomass/bio-based solid fuel combusted in the unit exceeds 20 percent moisture on an annual heat input basis.

Suspension burner means a unit designed to fire dry biomass/biobased solid particles in suspension that are conveyed in an airstream to the furnace like pulverized coal. The combustion of the fuel material is completed on a grate or floor below. The biomass/biobased fuel combusted in the unit shall not exceed 20 percent moisture on an annual heat input basis. Fluidized bed, dutch oven, pile burner, and hybrid suspension grate units are not part of the suspension burner subcategory.

Temporary boiler means any gaseous or liquid fuel boiler or process heater that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler or process heater is not a temporary boiler or process heater if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or process heater or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler or process heater that replaces a temporary boiler or process heater at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, process heat, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

Traditional fuel means the fuel as defined in § 241.2 of this chapter.

Tune-up means adjustments made to a boiler or process heater in accordance with the procedures outlined in § 63.7540(a)(10).

Ultra low sulfur liquid fuel means a distillate oil that has less than or equal to 15 ppm sulfur.

Unit designed to burn biomass/bio-based solid subcategory includes any boiler or process heater that burns at least 10 percent biomass or bio-based solids on an annual heat input basis in combination with solid fossil fuels, liquid fuels, or gaseous fuels.

Unit designed to burn coal/solid fossil fuel subcategory includes any boiler or process heater that burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

Unit designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

Unit designed to burn gas 2 (other) subcategory includes any boiler or process heater that is not in the unit designed to burn gas 1 subcategory and burns any gaseous fuels either alone or in combination with less than 10 percent coal/solid fossil fuel, and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, and no liquid fuels. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel during periods of gas curtailment or gas supply interruption of any duration are also included in this definition.

Unit designed to burn heavy liquid subcategory means a unit in the unit designed to burn liquid subcategory where at least 10 percent of the heat input from liquid fuels on an annual heat input basis comes from heavy liquids.

Unit designed to burn light liquid subcategory means a unit in the unit designed to burn liquid subcategory that is not part of the unit designed to burn heavy liquid subcategory.

Unit designed to burn liquid subcategory includes any boiler or process heater that burns any liquid fuel, but less than 10 percent coal/solid fossil fuel and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, either alone or in combination with gaseous fuels. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year are not included in this definition. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories during periods of gas curtailment or gas supply interruption of any duration are also not included in this definition.

Unit designed to burn liquid fuel that is a non-continental unit means an industrial, commercial, or institutional boiler or process heater meeting the definition of the unit designed to burn liquid subcategory located in the State of

Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Unit designed to burn solid fuel subcategory means any boiler or process heater that burns only solid fuels or at least 10 percent solid fuel on an annual heat input basis in combination with liquid fuels or gaseous fuels.

Useful thermal energy means energy (*i.e.,* steam, hot water, or process heat) that meets the minimum operating temperature, flow, and/or pressure required by any energy use system that uses energy provided by the affected boiler or process heater.

Vegetable oil means oils extracted from vegetation.

Voluntary Consensus Standards or VCS mean technical standards (*e.g.,* materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. EPA/Office of Air Quality Planning and Standards, by precedent, has only used VCS that are written in English. Examples of VCS bodies are: American Society of Testing and Materials (ASTM 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-B2959, (800) 262-1373, *http://www.astm.org*), American Society of Mechanical Engineers (ASME ASME, Three Park Avenue, New York, NY 10016-5990, (800) 843-2763, *http://www.asme.org*), International Standards Organization (ISO 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland, + 41 22 749 01 11, *http://www.iso.org/iso/home.htm*), Standards Australia (AS Level 10, The Exchange Centre, 20 Bridge Street, Sydney, GPO Box 476, Sydney NSW 2001, + 61 2 9237 6171 *http://www.stadards.org.au*), British Standards Institution (BSI, 389 Chiswick High Road, London, W4 4AL, United Kingdom, + 44 (0)20 8996 9001, *http://www.bsigroup.com*), Canadian Standards Association (CSA 5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6, Canada, 800-463-6727, *http://www.csa.ca*), European Committee for Standardization (CEN CENELEC Management Centre Avenue Marnix 17 B-1000 Brussels, Belgium + 32 2 550 08 11, *http://www.cen.eu/cen*), and German Engineering Standards (VDI VDI Guidelines Department, P.O. Box 10 11 39 40002, Duesseldorf, Germany, + 49 211 6214-230, *http://www.vdi.eu*). The types of standards that are not considered VCS are standards developed by: The United States, *e.g.,* California (CARB) and Texas (TCEQ); industry groups, such as American Petroleum Institute (API), Gas Processors Association (GPA), and Gas Research Institute (GRI); and other branches of the U.S. government, *e.g.,* Department of Defense (DOD) and Department of Transportation (DOT). This does not preclude EPA from using standards developed by groups that are not VCS bodies within their rule. When this occurs, EPA has done searches and reviews for VCS equivalent to these non-EPA methods.

Waste heat boiler means a device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators. Waste heat boilers are heat exchangers generating steam from incoming hot exhaust gas from an industrial (e.g., thermal oxidizer, kiln, furnace) or power (e.g., combustion turbine, engine) equipment. Duct burners are sometimes used to increase the temperature of the incoming hot exhaust gas.

Waste heat process heater means an enclosed device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat process heaters are also referred to as recuperative process heaters. This definition includes both fired and unfired waste heat process heaters.

Wet scrubber means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter or to absorb and neutralize acid gases, such as hydrogen chloride. A wet scrubber creates an aqueous stream or slurry as a byproduct of the emissions control process.

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

Table 1 to Subpart DDDDD of Part 63 - Emission Limits for New or Reconstructed Boilers and Process Heaters [c]

As stated in § 63.7500, you must comply with the following applicable emission limits:

Table 1 to Subpart DDDDD of Part 63 - Emission Limits for New or Reconstructed Boilers and Process Heaters [c]

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
1. Units in all subcategories designed to burn solid fuel	a. HCl	2.1E-04[a] lb per MMBtu of heat input	2.9E-04[a] lb per MMBtu of steam output or 2.7E-03[a] lb per MWh	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.0E-07[a] lb per MMBtu of heat input	8.7E-07[a] lb per MMBtu of steam output or 1.1E-05[a] lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
2. Units designed to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	1.1E-03 lb per MMBtu of steam output or 1.4E-02 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 2.9E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3-percent oxygen[d], 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent	0.11 lb per MMBtu of steam output or 1.4 lb	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
coal/solid fossil fuel		oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	per MWh; 3-run average	
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	1.2E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	590 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	6.1E-01 lb per MMBtu of steam output or 6.5 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	1.4E-02 lb per MMBtu of steam output or 1.9E-01 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 3.7E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen	4.3E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (5.0E-03 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (5.2E-03 lb per MMBtu of steam output or 7.0E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn	a. CO (or	130 ppm by volume on a dry basis corrected to 3-percent	1.3E-01 lb per MMBtu of steam output or 1.5 lb	1 hr minimum sampling

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
biomass/bio-based solids	CEMS)	oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	per MWh; 3-run average	time.
	b. Filterable PM (or TSM)	4.1E-03 lb per MMBtu of heat input; or (8.4E-06[a] lb per MMBtu of heat input)	5.0E-03 lb per MMBtu of steam output or 5.8E-02 lb per MWh; or (1.1E-05[a] lb per MMBtu of steam output or 1.2E-04[a] lb per MWh)	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	220 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 10-day rolling average)	0.18 lb per MMBtu of steam output or 2.5 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (8.0E-03 lb per MMBtu of heat input)	3.1E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (8.1E-03 lb per MMBtu of steam output or 1.2E-01 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	330 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 10-day rolling average)	3.5E-01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.5E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	3.4E-03 lb per MMBtu of steam output or 3.5E-02 lb per MWh; or (5.2E-05 lb per MMBtu of steam output or 5.5E-04 lb per MWh)	Collect a minimum of 3 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
12. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3-percent oxygen	1.1 lb per MMBtu of steam output or 1.0E+01 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	2.0E-02 lb per MMBtu of steam output or 1.6E-01 lb per MWh; or (5.1E-05 lb per MMBtu of steam output or 4.1E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	180 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3-percent oxygen[d], 30-day rolling average)	0.22 lb per MMBtu of steam output or 2.0 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	3.3E-02 lb per MMBtu of steam output or 3.7E-01 lb per MWh; or (5.5E-04 lb per MMBtu of steam output or 6.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	1.5E-04[a] lb per MMBtu of heat input	1.7E-04[a] lb per MMBtu of steam output or 2.1E-03[a] lb per MWh	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07[a] lb per MMBtu of heat input	5.3E-07[a] lb per MMBtu of steam output or 6.7E-06[a] lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent	0.13 lb per MMBtu of steam output or 1.4 lb	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
		oxygen, 3-run average	per MWh; 3-run average	
	b. Filterable PM (or TSM)	1.9E-03 lb per MMBtu of heat input; or (6.1E-06[a] lb per MMBtu of heat input)	2.1E-03 lb per MMBtu of steam output or 2.7E-02 lb per MWh; or (6.7E-6[a] lb per MMBtu of steam output or 8.5E-5[a] lb per MWh)	Collect a minimum of 3 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	1.2E-03[a] lb per MMBtu of steam output or 1.6E-02[a] lb per MWh; or (3.2E-05 lb per MMBtu of steam output or 4.0E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
			lb per MWh	sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	7.3E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	1.3E-02 lb per MMBtu of steam output or 7.6E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote "a", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before April 1, 2013, you may comply with the emission limits in Table 11, 12, or 13 to this subpart until January 31, 2016. On and after January 31, 2016, but before October 6, 2025 you may comply with the emission limits in Table 14 to this subpart. On and after October 6, 2025 you must comply with the emission limits in this Table 1.

[d] An owner or operator may determine compliance with the carbon monoxide emissions limit using CO_2 as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit and must also take into account that the 3-percent oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

Table 2 to Subpart DDDDD of Part 63 - Emission Limits for Existing Boilers and Process Heaters [d]

As stated in § 63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	2.0E-02 lb per MMBtu of heat input	2.3E-02 lb per MMBtu of steam output or 0.26 lb per MWh	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 120 liters per run.
	b. Mercury	5.4E-06 lb per MMBtu of heat input	6.2E-06 lb per MMBtu of steam output or 6.9E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	3.9E-02 lb per MMBtu of heat input; or (5.3E-05 lb per MMBtu of heat input)	4.1E-02 lb per MMBtu of steam output or 4.8E-01 lb per MWh; or (5.6E-05 lb per MMBtu of steam output or 6.5E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel	a. CO (or CEMS)	150 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	0.14 lb per MMBtu of steam output or 1.6 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	1.1 lb per MMBtu of steam output or 13 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.4E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input)	4.0E-02 lb per MMBtu of steam output or 4.8E-01 lb per MWh; or (2.4E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (5.0E-03 lb per MMBtu of heat input)	3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (5.9E-03 lb per MMBtu of steam output or 7.0E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solid	a. CO (or CEMS)	210 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	2.1E-01 lb per MMBtu of steam output or 2.3 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable	7.4E-03 lb per MMBtu of heat	9.2E-03 lb per MMBtu of	Collect a minimum of 1 dscm

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	PM (or TSM)	input; or (6.4E-05 lb per MMBtu of heat input)	steam output or 0.11 lb per MWh; or (8.0E-05 lb per MMBtu of steam output or 9.0E-04 lb per MWh)	per run.
10. Suspension burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	4.1E-02 lb per MMBtu of heat input; or (8.0E-03 lb per MMBtu of heat input)	4.2E-02 lb per MMBtu of steam output or 5.8E-01 lb per MWh; or (8.1E-03 lb per MMBtu of steam output or 0.12 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	770 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 10-day rolling average)	8.4E-01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.8E-01 lb per MMBtu of heat input; or (2.0E-03 lb per MMBtu of heat input)	2.5E-01 lb per MMBtu of steam output or 2.6 lb per MWh; or (2.8E-03 lb per MMBtu of steam output or 2.8E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solid	a. CO	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen	2.4 lb per MMBtu of steam output or 12 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (5.8E-03 lb per MMBtu of heat input)	5.5E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (1.6E-02 lb per MMBtu of steam	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
			output or 8.1E-02 lb per MWh)	
13. Hybrid suspension grate units designed to burn biomass/bio-based solid	a. CO (or CEMS)	3,500 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	3.5 lb per MMBtu of steam output or 39 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	4.4E-01 lb per MMBtu of heat input; or (4.5E-04 lb per MMBtu of heat input)	5.5E-01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E-04 lb per MMBtu of steam output or 6.3E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	1.1E-03 lb per MMBtu of heat input	1.4E-03 lb per MMBtu of steam output or 1.6E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	7.3E-07 lb per MMBtu of heat input	8.8E-07 lb per MMBtu of steam output or 1.1E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784[b] collect a minimum of 2 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.9E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input)	7.2E-02 lb per MMBtu of steam output or 8.2E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent	0.13 lb per MMBtu of steam output or 1.4 lb	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
		oxygen	per MWh	
	b. Filterable PM (or TSM)	7.9E-03 lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input)	9.6E-03 lb per MMBtu of steam output or 1.1E-01 lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.2E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	2.7E-01 lb per MMBtu of steam output or 3.1 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 2 dscm.
	d. Filterable PM (or TSM)	7.3E-03 lb per MMBtu of heat input or (2.1E-04 lb per MMBtu of heat input)	1.3E-02 lb per MMBtu of steam output or 7.6E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] An owner or operator may determine compliance with the carbon monoxide emissions limit be determined using CO_2 as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit and must also take into account that the 3-percent oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[d] Before October 6, 2025 you may comply with the emission limits in Table 15 to this subpart. On and after October 6, 2025], you must comply with the emission limits in this Table 2.

Table 3 to Subpart DDDDD of Part 63 - Work Practice Standards

As stated in § 63.7500, you must comply with the following applicable work practice standards:

If your unit is . . .	You must meet the following . . .
1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater	Conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540.
2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid	Conduct a tune-up of the boiler or process heater biennially as specified in § 63.7540.
3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater	Conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans.
4. An existing boiler or process heater located at a major source facility, not including limited use units	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on

If your unit is . . .	You must meet the following . . .
	or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least one year between January 1, 2008 and the compliance date specified in § 63.7495 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in § 63.7575: a. A visual inspection of the boiler or process heater system. b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints. c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator. d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage. e. A review of the facility's energy management program and provide recommendations for improvements consistent with the definition of energy management program, if identified. f. A list of cost-effective energy conservation measures that are within the facility's control. g. A list of the energy savings potential of the energy conservation measures identified. h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 15 to this subpart during startup	a. You must operate all CMS during startup. b. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.

If your unit is . . .	You must meet the following . . .
	c. You have the option of complying using either of the following work practice standards. (1) If you choose to comply using paragraph (1) of the definition of "startup" in § 63.7575, once you start firing fuels that are not clean fuels you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR (2) If you choose to comply using paragraph (2) of the definition of "startup" in § 63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels[a]. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in § 63.7505(e). d. You must comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in § 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in § 63.7555.
6. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart during shutdown	You must operate all CMS during shutdown. While firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device. If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur

If your unit is . . .	You must meet the following . . .
	diesel, refinery gas, and liquefied petroleum gas. You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in § 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in § 63.7555.

[a] As specified in § 63.7555(d)(13), the source may request an alternative timeframe with the PM controls requirement to the permitting authority (state, local, or tribal agency) that has been delegated authority for this subpart by EPA. The source must provide evidence that (1) it is unable to safely engage and operate the PM control(s) to meet the "fuel firing + 1 hour" requirement and (2) the PM control device is appropriately designed and sized to meet the filterable PM emission limit. It is acknowledged that there may be another control device that has been installed other than ESP that provides additional PM control (e.g., scrubber).

Table 4 to Subpart DDDDD of Part 63 - Operating Limits for Boilers and Process Heaters

As stated in § 63.7500, you must comply with the applicable operating limits:

Table 4 to Subpart DDDDD of Part 63 - Operating Limits for Boilers and Process Heaters

When complying with a numerical emission limit under Table 1, 2, 11, 12, 13, 14, or 15 of this subpart using . . .	You must meet these operating limits. . .
1. Wet PM scrubber control on a boiler or process heater not using a PM CPMS	Maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the performance test demonstrating compliance with the PM emission limitation according to § 63.7530(b) and Table 7 to this subpart.
2. Wet acid gas (HCl) scrubber[a] control on a boiler or process heater not using a HCl CEMS	Maintain the 30-day rolling average effluent pH at or above the lowest one-hour average pH and the 30-day rolling average liquid flow rate at or above the lowest one-hour average liquid flow rate measured during the performance test demonstrating compliance with the HCl emission limitation according to § 63.7530(b) and Table 7 to this subpart.
3. Fabric filter control on a boiler or process heater not using a PM CPMS	a. Maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average); or b. Install and operate a bag leak detection system according to § 63.7525 and operate the fabric filter such that the bag leak detection system alert is not activated more than 5 percent of the operating time during each 6-month period.
4. Electrostatic precipitator control on a boiler or process heater not using a PM CPMS	a. This option is for boilers and process heaters that operate dry control systems (*i.e.*, an ESP without a wet scrubber). Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity

When complying with a numerical emission limit under Table 1, 2, 11, 12, 13, 14, or 15 of this subpart using . . .	You must meet these operating limits. . .
	reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average). b. This option is only for boilers and process heaters not subject to PM CPMS or continuous compliance with an opacity limit (*i.e.*, dry ESP). Maintain the 30-day rolling average total secondary electric power input of the electrostatic precipitator at or above the operating limits established during the performance test according to § 63.7530(b) and Table 7 to this subpart.
5. Dry scrubber or carbon injection control on a boiler or process heater not using a mercury CEMS	Maintain the minimum sorbent or carbon injection rate as defined in § 63.7575 of this subpart.
6. Any other add-on air pollution control type on a boiler or process heater not using a PM CPMS	This option is for boilers and process heaters that operate dry control systems. Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average).
7. Performance testing	For boilers and process heaters that demonstrate compliance with a performance test, maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test.
8. Oxygen analyzer system	For boilers and process heaters subject to a CO emission limit that demonstrate compliance with an O_2 analyzer system as specified in § 63.7525(a), maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration measured during the CO performance test, as specified in Table 8. This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a).
9. SO_2 CEMS	For boilers or process heaters subject to an HCl emission limit that demonstrate compliance with an SO_2 CEMS, maintain the 30-day rolling average SO_2 emission rate at or below the highest hourly average SO_2 concentration measured during the HCl performance test, as specified in Table 8.

[a] A wet acid gas scrubber is a control device that removes acid gases by contacting the combustion gas with an alkaline slurry or solution. Alkaline reagents include, but not limited to, lime, limestone and sodium.

Table 5 to Subpart DDDDD of Part 63 - Performance Testing Requirements

As stated in § 63.7520, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources:

To conduct a performance test for the following pollutant . . .	You must. . .	Using, as appropriate . . .

To conduct a performance test for the following pollutant . . .	You must. . .	Using, as appropriate . . .
1. Filterable PM	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 to part 60 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the PM emission concentration	Method 5 or 17 (positive pressure fabric filters must use Method 5D) at 40 CFR part 60, appendix A-3 or A-6 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
2. TSM	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the TSM emission concentration	Method 29 at 40 CFR part 60, appendix A-8 of this chapter
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
3. Hydrogen chloride	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.

To conduct a performance test for the following pollutant . . .	You must. . .	Using, as appropriate . . .
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the hydrogen chloride emission concentration	Method 26 or 26A (M26 or M26A) at 40 CFR part 60, appendix A-8 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
4. Mercury	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the mercury emission concentration	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784.[a]
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
5. CO	a. Select the sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine oxygen concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-3 of this chapter, or ASTM D6522-00 (Reapproved 2005), or ANSI/ASME

To conduct a performance test for the following pollutant . . .	You must. . .	Using, as appropriate . . .
		PTC 19.10-1981.[a]
	c. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	d. Measure the CO emission concentration	Method 10 at 40 CFR part 60, appendix A-4 of this chapter. Use a measurement span value of 2 times the concentration of the applicable emission limit.

[a] Incorporated by reference, see § 63.14.

Table 6 to Subpart DDDDD of Part 63 - Fuel Analysis Requirements

As stated in § 63.7521, you must comply with the following requirements for fuel analysis testing for existing, new or reconstructed affected sources. However, equivalent methods (as defined in § 63.7575) may be used in lieu of the prescribed methods at the discretion of the source owner or operator:

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
1. Mercury	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192[a], or ASTM D7430[a], or ASTM D6883[a], or ASTM D2234/D2234M[a] (for coal) or EPA 1631 or EPA 1631E or ASTM D6323[a] (for solid), or EPA 821-R-01-013 (for liquid or solid), or ASTM D4177[a] (for liquid), or ASTM D4057[a] (for liquid), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), ASTM D5198[a] (for biomass), or EPA 3050[a] (for solid fuel), or EPA 821-R-01-013[a] (for liquid or solid), or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), or ASTM D5864[a] for liquids and other solids, or ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173[a], ASTM E871[a], or ASTM D5864[a], or ASTM D240[a], or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or equivalent.
	f. Measure mercury concentration in fuel sample	ASTM D6722[a] (for coal), EPA SW-846-7471B[a] or EPA 1631 or EPA 1631E[a] (for solid samples), or EPA SW-846-7470A[a] or EPA SW-846-7471B[a] (for liquid samples), or EPA 821-R-01-013[a] (for liquid or solid), or equivalent.
	g. Convert concentration into units of pounds of mercury per MMBtu of heat content	For fuel mixtures use Equation 8 in § 63.7530.

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
2. HCl	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192[a], or ASTM D7430[a], or ASTM D6883[a], or ASTM D2234/D2234M[a] (for coal) or ASTM D6323[a] (for coal or biomass), ASTM D4177[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), or ASTM D5198[a] (for biomass), or EPA 3050[a] or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), ASTM D5864[a], ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173[a] or ASTM E871[a], or D5864[a], or ASTM D240[a], or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or equivalent.
	f. Measure chlorine concentration in fuel sample	EPA SW-846-9250[a], ASTM D6721[a], ASTM D4208[a] (for coal), or EPA SW-846-5050[a] or ASTM E776[a] (for solid fuel), or EPA SW-846-9056[a] or SW-846-9076[a] (for solids or liquids) or equivalent.
	g. Convert concentrations into units of pounds of HCl per MMBtu of heat content	For fuel mixtures use Equation 7 in § 63.7530 and convert from chlorine to HCl by multiplying by 1.028.
3. Mercury Fuel Specification for other gas 1 fuels	a. Measure mercury concentration in the fuel sample and convert to units of micrograms per cubic meter, or	Method 30B (M30B) at 40 CFR part 60, appendix A-8 of this chapter or ASTM D5954[a], ASTM D6350[a], ISO 6978-1:2003(E)[a], or ISO 6978-2:2003(E)[a], or EPA-1631[a] or equivalent.
	b. Measure mercury concentration in the exhaust gas when firing only the other gas 1 fuel is fired in the boiler or process heater	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A or Method 102 at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784[a] or equivalent.
4. TSM	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192[a], or ASTM D7430[a], or ASTM D6883[a], or ASTM D2234/D2234M[a] (for coal) or ASTM D6323[a] (for coal or biomass), or ASTM D4177[a], (for liquid fuels), or ASTM D4057[a] (for liquid fuels), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), ASTM D5198[a] or TAPPI T266[a] (for biomass), or EPA 3050[a] or equivalent.
	d. Determine heat content of the	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), or ASTM

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
	fuel type	D5864[a] for liquids and other solids, or ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173[a] or ASTM E871[a], or D5864[a], or ASTM D240[a], or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or ASTM D4177[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent.
	f. Measure TSM concentration in fuel sample	ASTM D3683[a], or ASTM D4606[a], or ASTM D6357[a] or EPA 200.8[a] or EPA SW-846-6020[a], or EPA SW-846-6020A[a], or EPA SW-846-6010C[a], EPA 7060[a] or EPA 7060A[a] (for arsenic only), or EPA SW-846-7740[a] (for selenium only).
	g. Convert concentrations into units of pounds of TSM per MMBtu of heat content	For fuel mixtures use Equation 9 in § 63.7530.

[a] Incorporated by reference, see § 63.14.

Table 7 to Subpart DDDDD of Part 63 - Establishing Operating Limits [ab]

As stated in § 63.7520, you must comply with the following requirements for establishing operating limits:

Table 7 to Subpart DDDDD of Part 63 - Establishing Operating Limits [ab]

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
1. PM, TSM, or mercury	a. Wet scrubber operating parameters	i. Establish a site-specific minimum scrubber pressure drop and minimum flow rate operating limit according to § 63.7530(b)	(1) Data from the scrubber pressure drop and liquid flow rate monitors and the PM, TSM, or mercury performance test	(a) You must collect scrubber pressure drop and liquid flow rate data every 15 minutes during the entire period of the performance tests. (b) Determine the lowest hourly average scrubber pressure drop and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	b. Electrostatic precipitator operating parameters	i. Establish a site-specific minimum total secondary electric power input according to § 63.7530(b)	(1) Data from the voltage and secondary amperage monitors	(a) You must collect secondary voltage and secondary amperage for each ESP cell and calculate total secondary electric power

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
	(option only for units that operate wet scrubbers)		during the PM or mercury performance test	input data every 15 minutes during the entire period of the performance tests. (b) Determine the average total secondary electric power input by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	c. Opacity	i. Establish a site-specific maximum opacity level	(1) Data from the opacity monitoring system during the PM performance test	(a) You must collect opacity readings every 15 minutes during the entire period of the performance tests. (b) Determine the average hourly opacity reading by computing the hourly averages using all of the 15-minute readings taken during each performance test. (c) Determine the highest hourly average opacity reading measured during the test run demonstrating compliance with the PM (or TSM) emission limitation.
2. HCl	a. Wet scrubber operating parameters	i. Establish site-specific minimum effluent pH and flow rate operating limits according to § 63.7530(b)	(1) Data from the pH and liquid flow-rate monitors and the HCl performance test	(a) You must collect pH and liquid flow-rate data every 15 minutes during the entire period of the performance tests. (b) Determine the hourly average pH and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	b. Dry scrubber operating parameters	i. Establish a site-specific minimum sorbent injection rate operating limit according	(1) Data from the sorbent injection rate monitors and	(a) You must collect sorbent injection rate data every 15 minutes during the entire period

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
		to § 63.7530(b). If different acid gas sorbents are used during the HCl performance test, the average value for each sorbent becomes the site-specific operating limit for that sorbent	HCl or mercury performance test	of the performance tests.
				(b) Determine the hourly average sorbent injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test. (c) Determine the lowest hourly average of the three test run averages established during the performance test as your operating limit. When your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in § 63.7575, to determine the required injection rate.
	c. Alternative Maximum SO_2 emission rate	i. Establish a site-specific maximum SO_2 emission rate operating limit according to § 63.7530(b)	(1) Data from SO_2 CEMS and the HCl performance test	(a) You must collect the SO_2 emissions data according to § 63.7525(m) during the most recent HCl performance tests. (b) The maximum SO_2 emission rate is equal to the highest hourly average SO_2 emission rate measured during the most recent HCl performance tests.
3. Mercury	a. Activated carbon injection	i. Establish a site-specific minimum activated carbon injection rate operating limit according to § 63.7530(b)	(1) Data from the activated carbon rate monitors and mercury performance test	(a) You must collect activated carbon injection rate data every 15 minutes during the entire period of the performance tests. (b) Determine the hourly average activated carbon injection rate by computing the hourly averages

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
				using all of the 15-minute readings taken during each performance test. (c) Determine the lowest hourly average established during the performance test as your operating limit. When your unit operates at lower loads, multiply your activated carbon injection rate by the load fraction, as defined in § 63.7575, to determine the required injection rate.
4. Carbon monoxide for which compliance is demonstrated by a performance test	a. Oxygen	i. Establish a unit-specific limit for minimum oxygen level according to § 63.7530(b)	(1) Data from the oxygen analyzer system specified in § 63.7525(a)	(a) You must collect oxygen data every 15 minutes during the entire period of the performance tests. (b) Determine the hourly average oxygen concentration by computing the hourly averages using all of the 15-minute readings taken during each performance test. (c) Determine the lowest hourly average established during the performance test as your minimum operating limit.
5. Any pollutant for which compliance is demonstrated by a performance test	a. Boiler or process heater operating load	i. Establish a unit specific limit for maximum operating load according to § 63.7520(c)	(1) Data from the operating load monitors or from steam generation monitors	(a) You must collect operating load or steam generation data every 15 minutes during the entire period of the performance test. (b) Determine the average operating load by computing the hourly averages using all of the 15-minute readings taken during

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
				each performance test. (c) Determine the highest hourly average of the three test run averages during the performance test, and multiply this by 1.1 (110 percent) as your operating limit.

[a] Operating limits must be confirmed or reestablished during performance tests.

[b] If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests. For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests. For maximum operating load, if you conduct multiple performance tests, you must set the maximum operating load at the lower of the maximum values established during the performance tests.

Table 8 to Subpart DDDDD of Part 63 - Demonstrating Continuous Compliance

As stated in § 63.7540, you must show continuous compliance with the emission limitations for each boiler or process heater according to the following:

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
1. Opacity	a. Collecting the opacity monitoring system data according to § 63.7525(c) and § 63.7535; and b. Reducing the opacity monitoring data to 6-minute averages; and c. Maintaining daily block average opacity to less than or equal to 10 percent or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation.
2. PM CPMS	a. Collecting the PM CPMS output data according to § 63.7525; b. Reducing the data to 30-day rolling averages; and c. Maintaining the 30-day rolling average PM CPMS output data to less than the operating limit established during the performance test according to § 63.7530(b)(4).
3. Fabric Filter Bag Leak Detection Operation	Installing and operating a bag leak detection system according to § 63.7525 and operating the fabric filter such that the requirements in § 63.7540(a)(7) are met.
4. Wet Scrubber Pressure Drop and Liquid Flow-rate	a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§ 63.7525 and 63.7535; and b. Reducing the data to 30-day rolling averages; and c. Maintaining the 30-day rolling average pressure drop and liquid flow-rate at or above

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
	the operating limits established during the performance test according to § 63.7530(b).
5. Wet Scrubber pH	a. Collecting the pH monitoring system data according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average pH at or above the operating limit established during the performance test according to § 63.7530(b).
6. Dry Scrubber Sorbent or Carbon Injection Rate	a. Collecting the sorbent or carbon injection rate monitoring system data for the dry scrubber according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average sorbent or carbon injection rate at or above the minimum sorbent or carbon injection rate as defined in § 63.7575.
7. Electrostatic Precipitator Total Secondary Electric Power Input	a. Collecting the total secondary electric power input monitoring system data for the electrostatic precipitator according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average total secondary electric power input at or above the operating limits established during the performance test according to § 63.7530(b).
8. Emission limits using fuel analysis	a. Conduct monthly fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart; and
	b. Reduce the data to 12-month rolling averages; and
	c. Maintain the 12-month rolling average at or below the applicable emission limit for HCl or mercury or TSM in Tables 1 and 2 or 11 through 15 to this subpart.
	d. Calculate the HCl, mercury, and/or TSM emission rate from the boiler or process heater in units of lb/MMBtu using Equation 15 and Equations 16, 17, and/or 18 in § 63.7530.
9. Oxygen content	a. Continuously monitor the oxygen content using an oxygen analyzer system according to § 63.7525(a). This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a)(7).
	b. Reducing the data to 30-day rolling averages; and
	c. Maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen level measured during the CO performance test.
10. Boiler or process heater operating load	a. Collecting operating load data or steam generation data every 15 minutes. b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average operating load such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
	test according to § 63.7520(c).
11. SO_2 emissions using SO_2 CEMS	a. Collecting the SO_2 CEMS output data according to § 63.7525; b. Reducing the data to 30-day rolling averages; and c. Maintaining the 30-day rolling average SO_2 CEMS emission rate to a level at or below the highest hourly SO_2 rate measured during the HCl performance test according to § 63.7530.

Table 9 to Subpart DDDDD of Part 63 - Reporting Requirements

As stated in § 63.7550, you must comply with the following requirements for reports:

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. Information required in § 63.7550(c)(1) through (5); and	Semiannually, annually, biennially, or every 5 years according to the requirements in § 63.7550(b).
	b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards for periods of startup and shutdown in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and	
	c. If you have a deviation from any emission limitation (emission limit and operating limit) where you are not using a CMS to comply with that emission limit or operating limit, or a deviation from a work practice standard for periods of startup and shutdown, during the reporting period, the report must contain the information in § 63.7550(d); and	
	d. If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), or otherwise not operating, the report must contain the information in § 63.7550(e)	

Table 10 to Subpart DDDDD of Part 63 - Applicability of General Provisions to Subpart DDDDD

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

Citation	Subject	Applies to subpart DDDDD
§ 63.1	Applicability	Yes.
§ 63.2	Definitions	Yes. Additional terms defined in § 63.7575
§ 63.3	Units and Abbreviations	Yes.
§ 63.4	Prohibited Activities and Circumvention	Yes.
§ 63.5	Preconstruction Review and Notification Requirements	Yes.
§ 63.6(a), (b)(1)-(b)(5), (b)(7), (c)	Compliance with Standards and Maintenance Requirements	Yes.
§ 63.6(e)(1)(i)	General duty to minimize emissions.	No. See § 63.7500(a)(3) for the general duty requirement.
§ 63.6(e)(1)(ii)	Requirement to correct malfunctions as soon as practicable.	No.
§ 63.6(e)(3)	Startup, shutdown, and malfunction plan requirements.	No.
§ 63.6(f)(1)	Startup, shutdown, and malfunction exemptions for compliance with non-opacity emission standards.	No.
§ 63.6(f)(2) and (3)	Compliance with non-opacity emission standards.	Yes.
§ 63.6(g)	Use of alternative standards	Yes, except § 63.7555(d)(13) specifies the procedure for application and approval of an alternative timeframe with the PM controls requirement in the startup work practice (2).
§ 63.6(h)(1)	Startup, shutdown, and malfunction exemptions to opacity standards.	No. See § 63.7500(a).
§ 63.6(h)(2) to (h)(9)	Determining compliance with opacity emission standards	No. Subpart DDDDD specifies opacity as an operating limit not an emission standard.
§ 63.6(i)	Extension of compliance	Yes. Note: Facilities may also request extensions of compliance for the installation of combined heat and power, waste heat recovery, or gas pipeline or fuel feeding infrastructure as a means of

Citation	Subject	Applies to subpart DDDDD
		complying with this subpart.
§ 63.6(j)	Presidential exemption.	Yes.
§ 63.7(a), (b), (c), and (d)	Performance Testing Requirements	Yes.
§ 63.7(e)(1)	Conditions for conducting performance tests	No. Subpart DDDDD specifies conditions for conducting performance tests at § 63.7520(a) to (c).
§ 63.7(e)(2)-(e)(9), (f), (g), and (h)	Performance Testing Requirements	Yes.
§ 63.8(a) and (b)	Applicability and Conduct of Monitoring	Yes.
§ 63.8(c)(1)	Operation and maintenance of CMS	Yes.
§ 63.8(c)(1)(i)	General duty to minimize emissions and CMS operation	No. See § 63.7500(a)(3).
§ 63.8(c)(1)(ii)	Operation and maintenance of CMS	Yes.
§ 63.8(c)(1)(iii)	Startup, shutdown, and malfunction plans for CMS	No.
§ 63.8(c)(2) to (c)(9)	Operation and maintenance of CMS	Yes.
§ 63.8(d)(1) and (2)	Monitoring Requirements, Quality Control Program	Yes.
§ 63.8(d)(3)	Written procedures for CMS	Yes, except for the last sentence, which refers to a startup, shutdown, and malfunction plan. Startup, shutdown, and malfunction plans are not required.
§ 63.8(e)	Performance evaluation of a CMS	Yes.
§ 63.8(f)	Use of an alternative monitoring method.	Yes.
§ 63.8(g)	Reduction of monitoring data	Yes.
§ 63.9	Notification Requirements	Yes.
§ 63.10(a), (b)(1)	Recordkeeping and Reporting Requirements	Yes.

Citation	Subject	Applies to subpart DDDDD
§ 63.10(b)(2)(i)	Recordkeeping of occurrence and duration of startups or shutdowns	Yes.
§ 63.10(b)(2)(ii)	Recordkeeping of malfunctions	No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions.
§ 63.10(b)(2)(iii)	Maintenance records	Yes.
§ 63.10(b)(2)(iv) and (v)	Actions taken to minimize emissions during startup, shutdown, or malfunction	No.
§ 63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions	Yes.
§ 63.10(b)(2)(vii) to (xiv)	Other CMS requirements	Yes.
§ 63.10(b)(3)	Recordkeeping requirements for applicability determinations	No.
§ 63.10(c)(1) to (9)	Recordkeeping for sources with CMS	Yes.
§ 63.10(c)(10) and (11)	Recording nature and cause of malfunctions, and corrective actions	No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions.
§ 63.10(c)(12) and (13)	Recordkeeping for sources with CMS	Yes.
§ 63.10(c)(15)	Use of startup, shutdown, and malfunction plan	No.
§ 63.10(d)(1) and (2)	General reporting requirements	Yes.
§ 63.10(d)(3)	Reporting opacity or visible emission observation results	No.
§ 63.10(d)(4)	Progress reports under an extension of compliance	Yes.
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No. See § 63.7550(c)(11) for malfunction reporting requirements.
§ 63.10(e)	Additional reporting requirements for sources with CMS	Yes.

Citation	Subject	Applies to subpart DDDDD
§ 63.10(f)	Waiver of recordkeeping or reporting requirements	Yes.
§ 63.11	Control Device Requirements	No.
§ 63.12	State Authority and Delegation	Yes.
§ 63.13-63.16	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions	Yes.
§ 63.1(a)(5),(a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9).	Reserved	No.

Table 11 to Subpart DDDDD of Part 63 - Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After June 4, 2010, and Before May 20, 2011

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
2. Units in all subcategories designed to burn solid fuel that combust at least 10 percent biomass/bio-based solids on an annual heat input basis and less than 10 percent coal/solid fossil fuels on an annual heat input basis	a. Mercury	8.0E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
3. Units in all subcategories designed to burn solid fuel that combust at least 10 percent coal/solid fossil fuels on an annual heat input basis and less than 10 percent biomass/bio-based solids on an annual heat input basis	a. Mercury	2.0E-06 lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
4. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
5. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	CEMS)	ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	
6. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS).	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen ,[c] 10-day rolling average)	1 hr minimum sampling time.
7. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
8. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
9. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
10. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	560 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run
11. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
		ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run
12. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
13. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,010 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	8.0E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
14. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
15. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu	Collect a minimum of 3 dscm

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	PM (or TSM)	of heat input)	per run
16. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run
	b. Mercury.	4.8E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
17. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
18. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run
19. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 4 dscm per run
20. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote "a", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

Table 12 to Subpart DDDDD of Part 63 - Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After May 20, 2011, and Before December 23, 2011

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	3.5E-06[a] lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
4. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	260 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done

on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

Table 13 to Subpart DDDDD of Part 63 - Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After December 23, 2011, and Before April 1, 2013

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.6E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
2. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.8E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
3. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-02 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
4. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
5. Fluidized bed units with an integrated heat exchanger designed to burn	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
coal/solid fossil fuel		oxygen,[c] 30-day rolling average)	
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
6. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (410 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
7. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
8. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
9. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
10. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	810 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.6E-02 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
11. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
12. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
13. Units designed to burn liquid fuel	a. HCl	1.2E-03 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.9E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b]collect a minimum of 4 dscm.
14. Units designed to burn heavy liquid fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (18 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-03 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
15. Units designed to burn light liquid fuel	a. CO (or CEMS)	130[a] ppm by volume on a dry basis corrected to 3 percent oxygen; or (60 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 1-day block average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
16. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test; or (91 ppm	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
		by volume on a dry basis corrected to 3 percent oxygen,[c] 3-hour rolling average)	
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
17. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b]collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit and you are not required to conduct testing for CEMS or CPMS monitor certification, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

Table 14 to Subpart DDDDD of Part 63 - Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters [c]

As stated in § 63.7500, you may continue to comply with the following applicable emission limits until October 6, 2025:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	2.2E-02 lb per MMBtu of heat input	2.5E-02 lb per MMBtu of steam output or 0.28 lb per MWh	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.0E-07[a] lb per MMBtu of heat input	8.7E-07[a] lb per MMBtu of steam output or 1.1E-05[a] lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
2. Units designed to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	1.1E-03 lb per MMBtu of steam output or 1.4E-02 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 2.9E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
		average)		
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3- percent oxygen,[d] 30-day rolling average)	1.2E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	5.8E-01 lb per MMBtu of steam output or 6.8 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 3.7E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (4.2E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling	2.2E-01 lb per MMBtu of steam output or 2.6 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
		average)		
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 0.14 lb per MWh; or (1.1E-04[a] lb per MMBtu of steam output or 1.2E-03[a] lb per MWh)	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	3.1E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	330 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 10-day rolling average)	3.5E-01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	4.3E-03 lb per MMBtu of steam output or 4.5E-02 lb per MWh; or (5.2E-05 lb per MMBtu of steam output or 5.5E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based	a. CO	910 ppm by volume on a dry basis corrected to 3-percent	1.1 lb per MMBtu of steam output or 1.0E+01	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
solids		oxygen	lb per MWh	
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	3.0E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (5.1E-05 lb per MMBtu of steam output or 4.1E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	1.4 lb per MMBtu of steam output or 12 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	3.3E-02 lb per MMBtu of steam output or 3.7E-01 lb per MWh; or (5.5E-04 lb per MMBtu of steam output or 6.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	4.8E-04 lb per MMBtu of steam output or 6.1E-03 lb per MWh	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07[a] lb per MMBtu of heat input	5.3E-07[a] lb per MMBtu of steam output or 6.7E-06[a] lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable	1.3E-02 lb per MMBtu of heat	1.5E-02 lb per MMBtu of	Collect a minimum of 3

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	PM (or TSM)	input; or (7.5E-05[a] lb per MMBtu of heat input)	steam output or 1.8E-01 lb per MWh; or (8.2E-05[a] lb per MMBtu of steam output or 1.1E-03[a] lb per MWh)	dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	1.2E-03[a] lb per MMBtu of steam output or 1.6E-02[a] lb per MWh; or (3.2E-05 lb per MMBtu of steam output or 4.0E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
				collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote "a", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before April 1, 2013, you may comply with the emission limits in Table 11, 12, or 13 to this subpart until January 31, 2016. On and after January 31, 2016, but before October 6, 2025 you may comply with the emission limits in this Table 14. On and after October 6, 2025, you must comply with the emission limits in Table 1 to this subpart.

[d] An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

Table 15 to Subpart DDDDD of Part 63 - Alternative Emission Limits for Existing Boilers and Process Heaters[d]

As stated in § 63.7500, you may continue to comply with following emission limits until October 6, 2025:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed	a. HCl	2.2E-02 lb per MMBtu of heat	2.5E-02 lb per MMBtu of steam output or 0.27 lb	For M26A, Collect a minimum of 1 dscm per run;

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
to burn solid fuel		input	per MWh	for M26, collect a minimum of 120 liters per run.
	b. Mercury	5.7E-06 lb per MMBtu of heat input	6.4E-06 lb per MMBtu of steam output or 7.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	4.0E-02 lb per MMBtu of heat input; or (5.3E-05 lb per MMBtu of heat input)	4.2E-02 lb per MMBtu of steam output or 4.9E-01 lb per MWh; or (5.6E-05 lb per MMBtu of steam output or 6.5E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel	a. CO (or CEMS)	160 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3- percent oxygen,[c] 30-day rolling average)	0.14 lb per MMBtu of steam output or 1.7 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3- percent oxygen,[c] 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat	a. CO (or	140 ppm by volume on a dry basis corrected to 3-percent	1.3E-01 lb per MMBtu of steam output or 1.5 lb	1 hr minimum sampling

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
exchanger designed to burn coal/solid fossil fuel	CEMS)	oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	per MWh; 3-run average	time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	1.4 lb per MMBtu of steam output or 17 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.7E-02 lb per MMBtu of heat input; or (2.4E-04 lb per MMBtu of heat input)	4.3E-02 lb per MMBtu of steam output or 5.2E-01 lb per MWh; or (2.8E-04 lb per MMBtu of steam output or 3.4E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (4.6E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solid	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3- percent oxygen,[c] 30-day rolling average)	4.6E-01 lb per MMBtu of steam output or 5.2 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or	1.1E-01 lb per MMBtu of heat input; or (1.2E-03 lb per	1.4E-01 lb per MMBtu of steam output or 1.6 lb per MWh; or (1.5E-03 lb	Collect a minimum of 1 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	TSM)	MMBtu of heat input)	per MMBtu of steam output or 1.7E-02 lb per MWh)	
10. Suspension burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	5.2E-02 lb per MMBtu of steam output or 7.1E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	770 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 10-day rolling average)	8.4E-01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-01 lb per MMBtu of heat input; or (2.0E-03 lb per MMBtu of heat input)	3.9E-01 lb per MMBtu of steam output or 3.9 lb per MWh; or (2.8E-03 lb per MMBtu of steam output or 2.8E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solid	a. CO	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen	2.4 lb per MMBtu of steam output or 12 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (5.8E-03 lb per MMBtu of heat input)	5.5E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (1.6E-02 lb per MMBtu of steam output or 8.1E-02 lb per	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
			MWh)	
13. Hybrid suspension grate units designed to burn biomass/bio-based solid	a. CO (or CEMS)	3,500 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3- percent oxygen,[c] 30-day rolling average)	3.5 lb per MMBtu of steam output or 39 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	4.4E-01 lb per MMBtu of heat input; or (4.5E-04 lb per MMBtu of heat input)	5.5E-01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E-04 lb per MMBtu of steam output or 6.3E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	1.1E-03 lb per MMBtu of heat input	1.4E-03 lb per MMBtu of steam output or 1.6E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	2.0E-06 lb per MMBtu of heat input	2.5E-06 lb per MMBtu of steam output or 2.8E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784[b] collect a minimum of 2 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	6.2E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input)	7.5E-02 lb per MMBtu of steam output or 8.6E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	7.9E-03 lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input)	9.6E-03 lb per MMBtu of steam output or 1.1E-01 lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.7E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	3.3E-01 lb per MMBtu of steam output or 3.8 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 2 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input or (2.1E-04 lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of three dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[d] Before October 6, 2025 you may comply with the emission limits in this Table 15. On and after October 6, 2025, you must comply with the emission limits in Table 2 to this subpart.

Appendix F. Industrial Solid Waste Management Plan*

*Also included in the Tempo central file as a .pdf document

January 28, 2003

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I. Introduction
A. Scope and Authority

In accordance with Minnesota Rules Chapter 7011.1250, the Perham Resource Recovery Facility (hereinafter "Facility") hereby submits this Industrial Solid Waste Management Plan (hereinafter "Plan") in accordance with Minnesota Rules Chapter 7011.1245 requesting authorization to incinerate wastes as defined herein (hereinafter "Wastes") at their waste to energy incinerator located in Perham, Minnesota. This Plan is an updated Plan that supersedes all previous versions currently on file with the MPCA. The Facility requests that this Plan be incorporated by reference into their existing permit No. l 16H-85-OT-l, their Total Facility Part 70 Air Permit Applications and amendments, and all permits and amendments issued subsequent hereto.

This Plan has been prepared in accordance with the requirements of Minnesota Rules Chapter 7011.1245 titled 'General Waste Combustor Facility Requirements', Minnesota Rules Chapter 7011.1250, Sub. (1)-(3) titled 'Industrial Solid Waste Management Plan', and Minnesota Rules Chapter 7035.2535 Subpart 5, items (A) and (B) titled 'Industrial Solid Waste Management'.

This Plan sets forth procedures for qualifying Wastes for incineration and determining controlled feedrates to assure that net emissions increases from the incineration of Wastes do not exceed the insignificant increase thresholds yielding this amendment an Insignificant Amendment per Minn. Rules Chapter 7007.1250. The Facility also verifies emissions limits are not compromised using continuous emissions monitoring equipment for carbon monoxide, oxygen and opacity.

Based upon this Plan's procedures, the Facility will either approve or reject Wastes for incineration. The specific procedures set forth below outline the steps the Facility will utilize for evaluating Wastes, the methods the Facility will employ when incinerating the Wastes to protect human health and the environment by controlling feedrates and resulting emissions, and steps taken to assure Wastes are incinerated in a safe manner in accordance with all applicable regulations affecting the Facility.

The Facility may utilize a designated consultant to assist with the evaluation of Wastes for incineration in accordance with the requirements stated herein, and for general management of the Waste program. If the Facility so elects, the consultant will be authorized to approve or reject Wastes for incineration, and will have full authority to implement the procedures stated herein.

B. Facility Location & Description

The Perham Resource Recovery Facility (hereinafter "Facility") is owned by the City of Perham and is located at 201 South 6th Street, Perham, MN 56573 within Otter Tail County. The Facility operates two waste to energy combustors engineered, designed and built by Barlow Projects, Inc. The Facility is operated by Barlow Projects, Inc. Each unit is currently permitted at 58 tons/day for a total processing capacity of approximately 116 tons/day. The combustor combustion gases from each unit are combined and directed through a common boiler and economizer generating steam. Boiler/economizer exit gases are directed through a scrubber where activated carbon and lime are injected for controlling certain metals, dioxins and acid gases. Gases are then vented through a baghouse for controlling other metals and particulate matter and vented to atmosphere through a stack.

IL Generator and Hauler Notification Procedures

A. Procedures for Notifying Generators of the Facility's Operating Requirements and Restrictions, Steps Required when Submitting a Request for Incineration, and Facility Operating Requirements

1. General Scope

The Facility has established a notification procedure to ensure that all users of the Facility understand the conditions under which Wastes will be accepted for incineration at the Facility. Users are informed about the program requirements via documents described herein and verbal descriptions made by Facility representatives.

When Customers call the Facility inquiring about incineration of their Wastes, the Facility will explain that the Facility is capable of incinerating Wastes as defined herein. The Facility screens all potential Customers utilizing the following procedure:

1. The Facility explains they are only permitted to accept and incinerate Wastes.

2. The Facility inquires about the customers materials to determine if any potentially qualify as Wastes in accordance with this Plan.

After initial screening, Customers that initially qualify and elect to have the Facility evaluate their Wastes for incineration will be forwarded the following documents.

1. The Facility will forward the Customer a Non-Hazardous Industrial Solid Waste Incineration Program Description form (See Appendix A) and an Application for Incineration of Non-Hazardous Industrial Wastes form (See Appendix B).

2. If the Waste conforms with this Plan and is approved in accordance with this Plan's requirements after review of the completed Application for Incineration of Non-Hazardous Industrial Wastes and other profiling information, the Facility will forward the Customer a Certificate of Waste Approval form (See Appendix C) and a Scheduling, Packaging and Transportation Requirements form along with a Facility Location Map (See Appendix D).

3. After incineration, the Facility will forward the Customer a Certificate of Destruction form (See Appendix E).

2. Application for Incineration of Non-Hazardous Industrial Wastes

The Application for Incineration of Non-Hazardous Industrial Wastes is designed to accomplish the following objectives:

1. Identify Customer/Generator information;

2. Identify the type of packaging and quantities of Waste for incineration;

3. Obtain a written description of the Customer's Waste and process generating the Waste;

4. Obtain the physical characteristics of the Customer's Waste;

5. Identify special classes of Wastes for management including waste contaminated with used oil and petroleum spill media;

6. Identify and communicate analytical testing requirements in accordance with this Plan;
7. Identify and obtain generator knowledge relating to the Waste;

8. Obtain a Generator Certification that their waste conforms with the Application for Incineration of Non-Hazardous Industrial Wastes.

3. Certificate of Waste Approval

The Certificate of Waste Approval is a document intended to accomplish the following objectives:

1. Provide the Customer with a written certification that their Waste has been approved for incineration at the Facility in accordance with this Plan's requirements;

2. Provide the Customer with Facility contact information for scheduling deliveries of their Wastes.

4. Certificate of Destruction

The "Certificate of Destruction" is a document intended to accomplish the following objectives:

1. Provide the Customer with a written certification that their Waste has been delivered, accepted at and incinerated at the Facility;

2. Provide the Customer with the quantity of Waste incinerated at the Facility;

3. Provide the Customer with the date the incineration was completed.

B. Procedures For Notifying Haulers Of the Requirements Imposed on Them and the Facility's Operating Requirements & Restrictions

Customers are responsible for arranging for transportation of the Waste to the Facility. The Customer is forwarded a Scheduling. Packaging and Transportation Requirements form along with a Facility Location Map. Customers are instructed to forward this information to their haulers.

m. Procedure For Evaluating Wastes

The following sections of this Plan discuss the procedures that will be followed at the Facility when screening potential Wastes for incineration.

A. Procedure for Evaluating Candidate Materials as Wastes

Depending on the nature of the Waste, the Facility may require different analytical testing to be performed for the purpose of characterization. The following information will be reviewed for the purpose of accomplishing the foregoing:

1. An Application for Incineration of Non-Hazardous Industrial Wastes;
2. Material Safety Data Sheets available on all materials present in the Waste;
3. The Generator's Knowledge of the Waste, how it is generated, how it was handled, and the potential for the presence of hazardous contaminants for screening potential Wastes; and
4. The Generator's Certification that the Waste is non-hazardous and does not contain nor has it been contaminated with any hazardous components.

B. Qualifying Wastes Description

The Facility will manage (1) non-hazardous industrial solid wastes that conform with Minnesota Statutes Chapter 115.A03, Subd. 13(a) and Chapter 116.06, Subd. 22,
(2) RCRA exempt wastes including waste contaminated with used oil and petroleum spill media, and (3) other wastes the facility is specifically authorized to incinerate by the MPCA on a case by case basis.

Wastes meeting the foregoing criteria will be incinerated for energy recovery at the Facility if:

1. The Waste is combustible;
2. The combustion of the Waste will not result in the release of substances which will threaten the welfare of the employees or the environment; and
3. The combustion of the Waste will not result in the release of a pollutant in excess of emissions limits imposed on the Facility;

C. Specific Categories of Wastes that Will Not Be Accepted at the Facility Including Certain Problem Materials

Minnesota Rules Chapter 7035.2535 Subpart 5 A, Subitems (2)-(4) requires the Facility to affirmatively state how they will manage certain wastes at the Facility. The Facility will accept Municipal Solid Waste or Wastes. The Facility will not accept hazardous wastes or wastes that cannot be incinerated safely or which may result in a violation of the provisions specified in the Facility's Air Permit or MPCA Rules affecting the Facility. The Facility will not accept the following categories of wastes for incineration at their Facility:

a) Asbestos;
b) Ash from incinerators, resource recovery facilities and power plants;
c) Fluorescent/HID lamps (CII and RH);
d) Foundry wastes;
e) Hazardous wastes;
f) Lead acid, dry cell or rechargeable batteries;
g) Major appliances medical and infectious wastes;
h) Non-Combustibles;
i) Regulated infectious wastes;
j) Rendering & slaughterhouse wastes;
k) TSCA wastes;
l) Yard and tree waste.

D. Procedure for Evaluating 'Generic' Wastes

Even when a Waste qualifies for incineration, it must be further evaluated for the purpose of determining its chargerate to the incinerator to assure the insignificant emissions thresholds are not exceeded. This Plan includes an Incineration Chargerate Calculator included in Appendix F. The "Chargerate Calculator" is a spreadsheet which calculates the appropriate feedrate using total composition information for regulated constituents to emissions from combusting the same do not exceed the insignificant emissions thresholds as specified in Minn. Rules. Chapter 7007.1250 and Minn. Rules 7007.1251 for air toxics.

1. Insignificant Thresholds

The Insignificant Increase thresholds used in the "Chargerate Calculator" are summarized as follows:

Figure 1: Insignificant Thresholds

Per Minn. Rules. 7007.1250 and Minn. Rules 7007.1251

Compound	Insignificant Amendment Threshold Feedrate Limitation (tons/yr)	Products of Combustion
Nitrogen	9.986	NOx
Sulfur	9.986	SO2
Chlorine	2.500	Hal
Fluorine	0.025	HF
Antimony	1.250	Antimony
Arsenic	0.001	Arsenic
Beryllium	0.002	Beryllium
Cadmium	0.003	Cadmium
Chromium	1.250	Chromium
Cobalt	0.025	Cobalt
Lead	0.025	Lead
Manganese	0.200	Manganese
Mercury	0.003	Mercury
Nickel	0.250	Nickel
Selenium	0.025	Selenium

2. MSW Credits

For each pound of municipal solid waste burned, the Facility also emits a certain amount of each of the above compounds. Because the Facility is currently limited on total tonnage, when burning Wastes the Facility must displace municipal solid waste which could be otherwise be burned. Thus, for each pound of municipal solid waste displaced, the Facility also takes an 'emissions credit'. These credits are taken from Volume I of the Burnaby Report provided by the MPCA for heavy metals present in MSW, or an internet article from Rochester University stating typical concentrations of Sulfur and Nitrogen present in MSW (See Appendix G).

Figure 2: MSW Feed Credits: Due from Not Burning MSW:

Compound.	(#/#MSW)	Source
Nitrogen	0.005000	University of Rochester (0.5 wt%, N)
Sulfur	0.002000	University of Rochester (0.2 wt% S)
Chlorine	0.003100	AP---42
Fluorine	Not available	
Antimony	0.000033	Burnaby Final Report
Arsenic	0.000008	Burnaby Final Report
Bervllium	0.000003	Burnaby Final Report
Cadmium	0.000014	Burnaby Final Report
Chromium	0.000093	Burnaby Final Report
Cobalt	0.000000	Burnaby Final Report
Lead	0.000163	Burnaby Final Report
Manganese	0.000271	Burnaby Final Report

Mercurv	0.000001	Burnaby Final Report
Nickel	0.000017	Burnaby Final Report
Selenium	0.000005	Burnaby Final Report

3. Control Efficiencies

Lastly, because the Facility operates emissions control equipment, the control efficiency of the control equipment is taken into account when determining the allowable Chargerate. Inlet and outlet testing has been performed on all of the above constituents except HF, Sulfur Dioxide (sulfur) and Nitrogen Oxides (nitrogen). Where available, removal efficiencies from performance tests are used in the Chargerate Calculator.

The HF control efficiency has been set equal to the HCL removal efficiency.

For nitrogen, a certain amount of nitrogen compounds fed to the incinerator in the Waste remain in the ash and are not present in combustion gases directed through control equipment and released to the atmosphere. A mass balance was used to determine the amount of nitrogen released to atmosphere.

The removal efficiency for sulfur dioxide that has been used is the default control efficiency specified in Minnesota Air Permit Application Forms.

The most recent control efficiencies will be used in the Chargerate calculator. Facility specific control efficiencies determined via performance testing will be used preferentially over all other sources. Control efficiencies are summarized in the following table.

Figure 3: Control Efficiencies

	Basis for Control Efficiency	Inlet	Outlet	Units	Calculated Control Efficiency (%)
Nitroqen	FIRE Database Factor & Typical MSW Composition at 0.5wt% N/ton = 32.8 as NOx	32.80	3.16	#/Ton wl SD/FF	90.37%
Sulfur	AP-42 & Fire for Mass Burn	3.46	0.55	#/Ton w/ SD/FF	83.99%
Chlorine	4/2-3/02 & 512102 Perf Test	102.76	9.10	oom@.7% 02	91.14%
Fluorine	Set equal to Chlorine	102.76	9.10	ppm@. 7% 03	91.14%
Antimony	10/15/02 PerfTest	8188.00	469.00	uq/NmA3 @ 7%02	94.27%
Arsenic	10/15/02 PerfTest	1243.00	51.80	uq/NmA3 @ 7%02	95.83%
Beryllium	10/15/02 PerfTest	8.43	1.76	uq/NmA3 @ 7%02	79.12%
Cadmium	10/15/02 Perf Test	1923.00	1.38	uq/NmA3 @	99.93%

				7%02	
Chromium	10/15/02 Perf Test	1224.00	43.50	uo/NmA3 @ 7%02	96.45%
Cobalt	10/15/02 PerfTest	160.90	4.18	uq/NmA3 @ 7%02	97.40%
Lead	10/15/02 PerfTest	17196.00	1692.00	uo/NmA3 @ 7%02	90.16%
Manqanese	10/15/02 Perf Test	4323.00	127.30	uo/NmA3 @ 7%02	97.06%
Mercury	10/15/02 Perf Test	429.00	120.30	uq/NmA3 @ 7%02	71.96%
Nickel	10/15/02 Perf Test	488.00	21.20	uq/NmA3 @ 7%02	95.66%
Selenium	10/15/02 PerfTest	131.00	17.70	uq/NmA3 @ 7%02	86.49%

From all of the above information, the Facility calculates the maximum allowable feedrate to assure the net allowable emissions increase from the "Chargerate Calculator" is not exceeded.

4. Material Composition & Analytical Testing for Determining Chargerates

The "Chargerate Calculator" requires total composition information obtained during the profiling procedure to determine the allowable chargerate for each Waste. The chargerate calculator determines a maximum feedrate that is designed to assure that loading on the incinerator pollution control equipment does not exceed that quantity that the pollution control equipment can control in compliance with the Plan and air quality rules.

Appendix H includes total composition information from the MPCA for several materials. For any of the Wastes that are included in Appendix H, total composition data provided therewith will be used when Waste specific analytical testing and/or MSDS are not available to provide total composition data. Testing may not be required if the Generator can certify on the Application for Incineration of Non-Hazardous Industrial Wastes that the Waste does not contain any of the materials in excess of the allowable concentrations specified by the Incineration Chargerate Calculator at the selected chargerate based upon generator knowledge or material safety datasheets. If the Generator cannot so certify, then total composition analytical testing will be required.

The Facility's incinerator uses a controlled combustion chamber to control the rate of incineration. To mitigate any chances of uncontrolled burning due to the presence of Wastes fed to the incinerator and to assure complete combustion, the Facility will carefully monitor and control the mass feedrate of Wastes to assure the sound operation of the incinerator and safety of the employees is not compromised. The maximum feedrate to the incinerator shall be 20% of the rated heat input for all wastes excluding waste contaminated with used oil and petroleum spill media which will be fed at a maximum rate of 30% of the rated heat input. Waste feedrates will vary for each Waste as the feedrate will be dependent on its heating value.

The above procedure will be used for determining the feedrates of the Wastes that are not otherwise specifically addressed in this Plan including but not limited to the following specific types of Wastes:

1. Empty pesticide containers, but only if rinsed three times; RCRA empty Containers;
2. Fiberglass, urethane, polyurethane and epoxy resin waste;
3. Non-hazardous materials spilled or contained in the soil, and the soil collected therewith;
4. Paint & paint residues, dried paint filters and paint dust;
5. Spent activated carbon filters;

6. Sludges (some);
7. Tires (whole or shredded);
8. Wastes containing polychlorinated biphenyls at concentrations less than 50 ppm.

E. Specific Categories of Wastes Exempt from Testing: Solid Waste and Other Media Contaminated with Used Oil; Petroleum Spill Media

1. Solid Waste Contaminated with Used Oil

Minnesota Rules 7045.0845 states "No person shall place used oil in solid waste, apply used oil as a dust suppressant or for road treatment, or otherwise place used oil in

or on the land or waters of the state, including wastewater and stormwater collection systems". Additionally, Minnesota Rules 7045.0805, Sub. (A) states "Waste contaminated with used oil that is destined for disposal is subject to evaluation under parts 7045.0102 to 7045.0143 to determine if it is a hazardous waste ... unless the waste is: (1) Recycled as used oil under Minn. Rules 7045.0790 to 7045.0990 and (2) Rated at least 5000 BTU's per pound and burned for energy recovery".

Thus, the Facility will incinerate waste contaminated with on and off-specification used oil as defined in Minn. Rules. 7045.0020, Sub. (100a) which are managed in accordance with Minnesota Rules 7045.0790 to 7045.0990 and have a heating value of at least 5000 Btu/lb. These oily wastes include, but are not limited to, pads, socks, booms, sorbents and oil filter paper media. The Facility will accept solidified sludges of used oil and the foregoing solids.

Pursuant to Minn. Stat l 15A.916, sub (d), if whole oil filters including the exterior metal shells are accepted as a Waste for incineration at the Facility, the Facility will remove the exterior ferrous metal shells from the ash for recycling. The whole used oil filters will be collected separately from the mixed municipal solid waste. The whole used oil filters will not be mixed with MSW, except for the purpose of incineration. This Waste will be accepted at the Facility without any analytical testing and its feedrate will only be limited by the BTU input limitation.

2. Petroleum Spill Media:

Minnesota Rules Chapter 7045.0210, Subpart (1) and (W) provides the following exemption from the hazardous waste rules:

Subpart I. Exempt types of waste. The following waste may be stored, labeled, transported, treated, processed, and disposed of without complying with the requirements of this chapter:

Subp. W. sorbents, soil, and debris contaminated with petroleum fuel from spills and emergencies that are contained and reported in accordance with Minnesota Statutes, section
except for used oil spills and emergencies.

Minnesota Statutes Section 115.061 provides the following reporting requirements for petroleum spills and emergency releases:
(a) Except as provided in paragraph (b), it is the duty of every person to notify the agency immediately of the discharge, accidental or otherwise, of any substance or material under its control which, if not recovered, may cause pollution of waters of the state, and the responsible person shall recover as rapidly and as thoroughly as possible such substance or material and take immediately such other action as may be reasonably possible to minimize or abate pollution of waters of the state caused thereby.

(b) Notification is not required under paragraph (a) for a discharge of five gallons or less of petroleum, as defined in section 11SC.02, subdivision l 0. This paragraph does not affect the other requirements of paragraph (a).

Accordingly, the Facility will also accept sorbents, soil, and debris contaminated with petroleum fuel from spills and emergencies so long as the spills are reported and assigned a spill number from the Minnesota Duty Officer. This Waste will be accepted at the Facility without any analytical testing and its feedrate will only be limited by the BTU input limitation.

F. Frequency of Analytical Testing

Prior to acceptance of any Waste for incineration, the Facility evaluates all Wastes in accordance with the procedures above to determine if they qualify as a Waste.
Analytical testing will be required in accordance with the procedures set forth above before any Wastes will be approved for incineration at the Facility.

Wastes may be approved for incineration either on an ongoing or one time basis. Wastes which will be incinerated on an ongoing basis, after initial testing and approval, will not require subsequent testing if the nature of the waste stream or waste does not change. If the nature of the waste stream or waste changes, i.e. the process generating the waste changes or the waste becomes contaminated from another source, the Facility will require re-profiling of the waste to verify it still qualifies as a Waste.

G. Analytical Methods Used For Testing

The EPA approved analytical testing methods used for evaluation of wastes are presented in this section. Testing will be performed by an independent analytical laboratory.

Method 1311 TCLP Testin2	
Arsenic, Barium, Cadmium, Chromium, Lead, Selenium & Silver	SW 846, 6010 (EPA200.7)
Mercury	SW 846, 7470 (EPA245.2)
Benzene, Carbon Tetrachloride, Chlorobenzene, Chloroform, o-Creosol, m-Creosol, p-Creosol, Creosol, 1,4-Dichlorobenzene, 1,2-Dichloroethane, 1,1-Dichelorethylene, Dinitrotolulene, Endrin, Heptachlor, Hexachlorobezene, Hexachlorobutadiene, Hexachloroethane, Lindane, Methoxychlor, MEK, Nitrobenzene, Pentachlorophenol, Pyridine, Tetrachloroethylene, Toxaphene, Trichloroethylene, 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 2,4,5-TP (Silvex), Vinyl Chloride	Method 8240 or 8270

Total Composition Test for the Eight (8) Heavv Metals	
Arsenic	SW 846, 7060 (EPA 206.2)
Barium, Cadmium, Chromium, Lead & Silver	SW 846, 6010 (EPA 200.7)

Mercury	SW 846, 7470 (EPA 245.2)
Selenium	SW 846, 7740 (EPA 270.2)

Flash Point Test	
Flash Point	ASTM D93

Heat Content Test	
Heat Content	ASTM D240

Total Halogens	
Total Halogens	ASTM D808 or D4327

Total Nitrogen	
Total Nitrogen	ASTM D3828

Total Sulfur	
Total Sulfur	ASTM D129

H. Problem Materials as Defined In Minnesota Statutes, §115A.03, Sub 24(a) That Will be Managed as Wastes

Minnesota Statute section l 15A.03, sub 24(a) defines problem materials. Some of these problem materials are prohibited from land disposal and/or disposal in a solid waste processing or disposal Facility. Because the combustion of materials in incinerators breaks down organic materials to carbon dioxide and water when completely combusted, depending on the material, incineration removes the environmental threat posed by disposing of some of the materials along with municipal solid waste in landfills.

Pursuant to Minn. Rules 7011.1250 Sub. 2, the Facility's practices for managing the following materials, designated as "problem materials", are presented below:

1. Motor Vehicle Fluids and Filters

Motor vehicle fluids and filters will be managed in accordance with this Plan.

2. Automobile and Other Tires

Automobile and other tires will be managed in accordance with this Plan.

3. Mercury Containing Products

Mercury containing wastes will be managed in accordance with this Plan.
Mercury articles will not be managed in accordance with this Plan.

IV. Procedure For Waste Management

Wastes will be Managed on-site at the Facility after delivery using the following procedures:

A. Incoming Waste Inspection and Rational For Accepting Incoming Waste Or Rejecting Incoming Waste & Requiring Further Information

All Waste are inspected when they arrive at the Facility, and the Facility attempts to burn all Waste within 5 working days of receipt. The wastes are inspected and compared with the Application for Incineration of Non-Hazardous Industrial Wastes form to assure the waste in the containers is indeed the waste specified. If the material delivered does not conform with the waste described therein, the Customer will be contacted to correct the non-conformity. If the non-conformity cannot be remedied, the Waste will be rejected and returned to the Generator.

B. On-Site Waste Handling

This section of the Plan discusses the procedures that will be followed by the Facility for managing wastes that have been accepted for incineration as a Wastes at the Facility.

The Wastes are kept in separate containers in the incinerator building. The Wastes are charged directly to the incinerator. To assure complete combustion of the Waste, these wastes are charged at a maximum of approximately 20% or 30% of the rated heat input to the incinerator depending on the type of waste material in accordance with this Plan. The incinerator is rated at 42,750,000 BTU/hour heat input. Rolling averages will be used to assure compliance with mass based emissions limitations.

Wastes that are delivered to the facility will be thoroughly mixed with municipal solid waste prior to incineration to assure that the Waste is properly incinerated. During combustion of Special Wastes, the facility will take special care to observe operating conditions including but not limited to temperature profiles, CEM data and ash burnout to assure that the Wastes are properly incinerated.

V. Plan Modifications, Amendments, & MPCA Notification:

The Facility will amend this Plan whenever the management practices change, or when it requests a change in the kinds of wastes accepted at the Facility. The Facility will submit a copy of the amended Plan to the MPCA when such changes occur in accordance with Minn. Rules 7011.1250, Sub. (3).

ISWMP Appendix A: Non-Hazardous Industrial Waste Incineration Program Description

Perham Resource Recovery Facility
201 South 6th Street, Perham, MN 56573 Phone: (218)346-4404 FAX: (218)346-4434

Non-Hazardous Industrial Waste Incineration Program Description
Incineration for Energy Recovery

Thank you for inquiring with the Perham Resource Recovery Facility for your waste disposal needs. Our Facility is authorized under its MPCA approved Industrial Solid Waste Management Plan to incinerate Special Wastes at our incinerator Facility. The Industrial Solid Waste Management Plan specifies the procedures our Facility must follow to assure wastes are rigorously evaluated to verify they are non-hazardous through testing, etc., and to assure the wastes are incinerated in a safe and environmentally sound manner in accordance with all currently applicable regulations. The heat generated from the combustion of your waste is used to produce steam which is recovered in a waste heat boiler and is used in industrial processes.

To determine if your waste may qualify as a Special Waste for incineration, your waste must be evaluated by our staff to determine if it is non-hazardous in accordance with the requirements specified in our MPCA Approved Industrial Solid Waste Management Plan. A description of the procedure and its requirements are specified as follows:

STEP #1: The Waste Evaluation Process:

1. Our staff will perform an initial over the phone consultation to determine if your waste may qualify as a Special Waste for Incineration.
2. If our staff determines that your waste may qualify as a Special Waste, and you would like it incinerated, this Application must be completed. An 'Application for Incineration of Non-Hazardous Industrial Waste' will be forwarded to you for your completion.

3. Our staff will evaluate the information received from your company to verify your waste qualifies as Special Waste in accordance with our Industrial Solid Waste Management Plan requirements. After evaluation, our staff will either notify you that your waste qualifies as Special Waste, request additional information, or reject your waste because test results indicate it is hazardous.
4. If your waste is approved, the Facility will assign a unique 'waste profile number' that will be used to track your waste. The Facility will also forward you a Certificate of Waste Approval' and the Facility's 'Scheduling, Packaging and Transporting Requirements' information.

STEP #2: After Approval: Initiating The Disposal Process:
To schedule a delivery, notify the facility at least two days in advance. All deliveries must be made in packaging that is approved by the Facility as provided in the 'Scheduling, Packaging and Transporting Requirements' form.

STEP #3: After Incineration:
After your waste is incinerated, the Facility will forward you a 'Certificate of Bum" certifying that your waste has been incinerated within 10 business days after actual incineration.

The City of Perham will invoice you for the incineration of your Special Waste. The invoice amount will reflect the incineration costs based upon the fee charged. Payment is due within 30 days after your receipt of the invoice.
Please call with any questions at 218-346-4404.

Sincerely,
Perham Resource Recovery Facility

Mark Larson
Plant Manager

ISWMP Appendix B: Application for Incineration of Non-Hazardous Industrial Wastes

Perham Resource Recovery Facility

Waste Profile Number

201 South 6th Street, Perham, MN 56573 Phone: (218)346-4404 FAX: (218)346-4434

Application for Incineration of Non-Hazardous Industrial Wastes

STEP 1 Generator and Customer Information

Generator: _____ EPA ID # _____
Contact Name: _____ Title: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone #: _____ Fax #: _____

Customer: _____
Contact Name: _____
Address: _____
City: _____
Phone #: _____ Fax #: _____

STEP 2 Packaging

Type of Packaging:		
Estimated Volume:		
lbs/year	Packages/year	

STEP 3 Waste Description & Physical Characteristics

Provide a brief description of the waste material and the process generating the waste material

Physical Characteristics

Density	Avg.	lbs/ft^3	Max.	lbs/ft^3	Min.	lbs/ft^3
Flash Point	Avg.	(F)	Max.	(F)	Min.	(F)
Heating Value	Avg.	BTU/lb	Max.	BTU/lb	Min.	BTU/lb
pH	Avg.		Max.		Min.	
Viscosity	Avg.	cp	Max.	cp	Min.	cp

General Description

Chemical Description	Organic Waste ☐		Inorganic Waste ☐		Organic/Inorganic Mix ☐	
Physical State	Liquid ☐		Solid ☐		Semi-Solid ☐	
Phase/Layering	Uni-layer ☐		Bi-Layer ☐		Multi-layer ☐	
Moisture	Liquid Fraction	wt-(%)	Solid Fraction		wt-(%)	
Appearance						
Color						
Odor						

Other Characteristics

Reactivity	explosive ☐	may detonate ☐	unstable ☐	Normally stable ☐	stable ☐
Health Hazards	deadly ☐	extreme danger ☐	dangerous ☐	slight danger ☐	none ☐
Other Hazards	water reactive ☐		oxidizer ☐	radioactive ☐	

STEP 4 Required Analytical Testing

A. Total Composition

☐ Nitrogen	☐ Fluorine	☐ Barium	☐ Cobalt	☐ Mercury	☐ Vanadium
☐ Sulfur	☐ Iodine	☐ Beryllium	☐ Copper	☐ Nickel	☐ Zinc
☐ Bromine	☐ Antimony	☐ Cadmium	☐ Lead	☐ Selenium	
☐ Chlorine	☐ Arsenic	☐ Chromium	☐ Manganese	☐ Silver	

B. TCLP Leachate – TCLP is required for individual compounds where the Total Composition result above exceeds 20 times the corresponding RCRA Limit.

☐ Arsenic	☐ Cadmium	☐ Lead	☐ Selenium	☐ TCLP – Volatile Organics
☐ Barium	☐ Chromium	☐ Mercury	☐ Silver	☐ TCLP – Semi-Volatile Organics
				☐ TCLP – Herbicides / Pesticides

C. Other Testing

Only required if contaminant is known to be present at the source or if trait is suspected.

☐ pH	☐ Reactive Sulfide/Cyanide	☐ Total Composition – Volatile Organics
☐ Flashpoint	☐ Paint Filter Test	☐ Total Composition – Semi-Volatile
☐ Btu	☐ F Listed Solvents	
☐ PCBs	☐ Other: _____	

STEP 5 Petroleum Spill Media (Complete only if applicable)

Solids Present: (check all that apply)

- ☐ Combustible Sorbents
- ☐ Clay Sorbents
- ☐ Booms, Pads, Socks
- ☐ Spill Debris
- ☐ Other: _____

Petroleum Products Present (Check all that apply)

- ☐ Liquid Petroleum products as defined in Minnesota Rules Chapter 115C.02
- ☐ Gasoline
- ☐ Fuel Oil Grade No. 2
- ☐ Fuel Oil Grade No. 6
- ☐ Gas Turbine Fuel
- ☐ E85
- ☐ Aviation Fuel
- ☐ Fuel Oil Grade Nos. 3-5
- ☐ Ethanol Fuels
- ☐ Dyed Fuels
- ☐ Other_____

Please check the following:

True	False	
☐	☐	The waste contains only sorbents, soil, and debris contaminated with petroleum fuel from spills.
☐	☐	The spill has been contained and in accordance with Minnesota Statues Section 115.061.
☐	☐	The spill was reported in accordance with Minnesota Statutes and assigned the following MPCA Spill ID Number.
☐	☐	The waste does not contain any free flowing liquids.

MPCA Spill Number	

If any of the above boxes are checked 'False', please complete the following:

True	False	
☐	☐	The waste is non-hazardous as determined by application of generator knowledge, review of MSDS sheets for the petroleum media, and/or the attached analytical testing (if any).

STEP 6 Waste Contaminated with Used Oil (Complete only if applicable)

Solids Present: (check all that apply)

- ☐ Combustible Sorbents
- ☐ Clay Sorbents
- ☐ Rags, Pads, Socks Booms, Etc.
- ☐ Oil Filter Media (including paper, polypropylene, etc)
  Note: Waste must not include steel oil filters
- ☐ Other: _____

Used Oils Present (Check all that apply)

Lubricants

- ☐ Motor Oil (synthetic or natural)
- ☐ Grease
- ☐ Emulsions
- ☐ Refrigerant Oil
- ☐ Metalworking lubricant incl. aqueous lubricants containing petroleum

Heat Transfer Fluids

- ☐ Coolant
- ☐ Heating Media
- ☐ Electrical Insulation Oil

Hydraulic Fluids

- ☐ Transmission Fluid
- ☐ Power Steering Fluid
- ☐ Brake Fluid
- ☐ General Hydraulic Fluid

☐ _____
☐ Sludges and/or Residues of any of the above used oils that can be as a fuel that are generated from storage, processing or refining

STEP 7 Generator Knowledge and Material Safety Data Sheets

Please check the following:

True	False	
☐	☐	My industrial waste is not a listed hazardous waste.
☐	☐	My industrial waste is not an infectious waste.
☐	☐	My industrial waste is not a TSCA waste.
☐	☐	My industrial waste does not contain PCB's in excess of 49 mg/kg.
☐	☐	My industrial waste described herein contains only wastes that have been individually evaluated and analyzed (as required) and verified to conform with the Perham Resource Recovery Facility's Industrial Waste Management Plan.
☐	☐	I have included all MSDS' available for my waste and/or products present in my waste.
☐	☐	I have included analytical testing that conforms with the boxes checked above in Section 6.

STEP 8 Generator Certification

As an authorized representative of the generator, I hereby certify that the information above, including all attachments, is correct and that no deliberate or willful omission of composition or properties exist, and that all known or suspected hazards have been disclosed, and to the best of my knowledge, my industrial waste is not known to be hazardous, nor commingled with or contaminated with any hazardous materials. I understand the above information and all attachments will be reviewed and the Facility will either (1) approve my waste (2) request additional information, or (3) reject my waste for incineration. I understand that if I deliver to the facility a waste material that does not conform with this profile (non-conforming waste), the Perham Resource Recovery Facility ('Facility') will notify me, the Facility will reject my waste and that I will be responsible for all costs and fees incurred by the Facility is returning and or/ managing my waste. I agree to hold harmless and indemnify the City of Perham, Perham Resource Recovery Facility, and Barlow Projects and its directors, officers, agents and employees from any and all liability, loss, costs, or damage resulting from all claims, lawsuits, or similar arising from the carrying out of operations or transactions associated with the disposal of the above material as described in this Application for Incineration of Non-Hazardous Industrial Wastes.

Name (print): _____ Title: _____

Signature: _____ Date: _____

ISWMP Appendix C: Ceritifcate of Waste Approval

Perham Resource Recovery Facility
201 South 6th Street, Perham, MN 56573 Phone: (218)346-4404 FAX: (218)346-4434

Certificate of Waste Approval
Incineration for Energy Recovery

Date

Contact/Title Company Address
City, State Zip

Re: Waste Description: Generator:
Waste Profile #:

Dear
Please be advised that the above described material has been reviewed and is approved for management at the Perham Resource Recovery Facility waste to energy incinerator facility based on the information provided in the Application for Incineration of Non-Hazardous Industrial Wastes form and the conditions below.

Acceptance is subject to the following conditions:
1. The waste material delivered to the Facility conforms with the Application for Incineration of Non-Hazardous Industrial Wastes
2. The waste material is absent of free liquids;
3. A non-hazardous waste manifest or bill of lading accompanies each shipment of waste material;

To schedule a shipment of your waste, or if you have any questions, please call Mark Larson of the Perham Resource Recovery Facility at 218-346-4404.

Sincerely,
Perham Resource Recovery Facility

Mark Larson
Plant Manager

ISWMP Appendix D: Scheduling, Packaging and Transporting Requirements

Perham Resource Recovery Facility
2111 South 6th Street, Perham, MN 56573 Phone: (218)346-44114 FAX: (218)346-4434

Scheduling, Packaging and Transporting Requirements
Incineration for Energy Recovery

The following requirements are intended to notify Haulers of the Perham Resource Recovery Facility's procedures and operating requirements. If the material is not transported, packaged and delivered in compliance with these restrictions, the Perham Resource Recovery Facility reserves the right to refuse your waste for incineration.

1. Manifesting: Wastes must be shipped on a non-hazardous waste manifest or on a bill of lading.

2. Transporters: Wastes must be transported using a DOT approved waste hauler.

3. Scheduling: The Facility must be notified at least two days before the waste is delivered to the facility. Call the facility to schedule a waste drop off date and time.

4. Containers: The waste must be packaged in some type of DOT approved container to prevent airborne materials and/or free flowing materials from creating employee hazards. The Special Wastes must be contained or packaged as follows:

- Roll-offs: Waste may be delivered in any size roll-off container.

- Walking Floor Trailers: Wastes may be delivered in walking floor trailers.

- Gaylords: Wastes may be delivered in cardboard gaylords.

- Cardboard Boxes: If your waste is packaged in cardboard boxes, the boxes must be leak proof and no larger than 2'x2'x2'.

- Plastic Bags: If your waste is packaged in plastic bags, the bags must be tied and weigh a maximum of 75 pounds.
- Cardboard Or Plastic Drums: Wastes may be delivered in 55 gallon or smaller fiber or plastic drums.
- UNACCEPTABLE PACKAGING: Metal containers including open and closed top containers of all sizes including 55 gallon drums

5. Facility Location: See the attached map for directions to the facility.

Please call with any questions at 218-346-4404.

Sincerely,
Perham Resource Recovery Facility

Mark Larson
Plant Manager

ISWMP Appendix E: Certificate of Destruction

Perham Resource Recovery Facility
2111 South 6th Street, Perham, MN 56573 Phone: (218)346-4404 FAX: (218)346-4434

Certificate of Destruction
Incineration for Energy Recovery

Waste Profile Number	
Waste Description	
Generator	
Address	
City, State Zip	

Date Waste Received	
Waste Manifest Number	
Number of Containers Received	
Container Description	
Total Weight	

Date Burn Completed

Certified By:
The above described waste was incinerated for energy recovery in accordance with State and Federal Regulations.

Mark Larson Pant Manager
Perham Resource Recovery Facility Date

ISWMP Appendix F: Spreadsheet for Determining Waste Feedrates to Incinerator

Perham Resource Recovery Facility: Chargerate Calculator

Waste Profile Number: S-10045

1) SPECIAL WASTE FEEDRATE RESTRICTION - HEAT INPUT LIMITATION·

Heat Content of Waste	12000	(BTU/#)
Heat Input Incinerator	42,750,000	(BTU/hr)
Heat Input Limitation (% total Heat Input of Incinerator)	20.00%	
Maximum Allowable Special Waste Charge Rate Based on Heat Input	713	(#/hr)

2) SPECIAL WASTE FEEDRATE RESTRICTION -AIR IMPACT RESTRICTION:

21) Additional emissions allowed - [modification approach)

Regulated Pollutant Present in Special Waste	Insignificant Modification Threshold (tons/yr emitted)	Source	Elemental Surrogate	Additional Emissions allowed @ stack (uncontrolled #/hr)	Control Efficiency (%)	Additional Emissions allowed @ stack **(controlled #/hr) (A)**
NOX	9,986	Minn Rules 7007.1450, Subp. 2	Nitrogen	0.693863	90.37%	7.202125
SOx	9,986	Minn Rules 7007.1450, Subp. 2	Sulfur	1.141089	83.99%	7.126658
HCl	2.500	Minn Rules 7007.1251	Chlorine	0.570776	91.14%	6.445381
HF	0.025	Minn Rules 7007.1251	Fluorine	0.005420	91.14%	0.061207
Antimony & Compounds	1.250	Minn Rules 7007.1251	Antimony	0.285388	94.27%	4.982426
Arsenic & Compounds	0.001	Minn Rules 7007.1251	Arsenic	0.000285	95.83%	0.006848
Beryllium & Compounds	0.002	Minn Rules 7007.1251	Beryllium	0.000457	79.12°/o	0.002187
Cadmium & Compounds	0.003	Minn Rules 7007.1251	Cadmium	0.000571	99.93%	0.793639
Chromium & Compounds	1.250	Minn Rules 7007.1251	Chromium	0.285388	96.45%	8.030231
Cobalt & Compounds	0.025	Minn Rules 7007.1251	**Cobalt**	0.005708	97.40%	0219708
Lead & Compounds	0.025	Minn Rules 7007.1450, Subp. 2	**Lead**	0.005708	90.16%	0.058009
Manganese & Compounds	0.200	Minn Rules 7007.1251	Manganese	0.045662	97.06%	1.550646
Mercury & Compounds	0.003	Minn Rules 7007.1251	Mercury	0,000571	71.96%	0.002035
Nickel & Compounds	0.250	Minn Rules 7007.1251	Nickel	0.057078	95.66%	1.313862
Selenium & Compounds	0.025	Minn Rules 7007.1251	Selenium	0.005708	86.49%	0.042244

2b) Additional emissions allowed from MSW not burned - [credit approach)

Element present in MSW	MSW Composition (g/tonne)	Additional Emissions - (# element/ # MSW not burned) **{B}**	Source
Nitrogen		0.005000	Internet Article: University of Rochester (0.5 wt%-N)
Sulfur		0.002000	Internet Article: University of Rochester *(02* wt% S)
Chlorine		0.003100	AP-42
Fluorine			n/a
Antimony	33.000000	0.000033	from Burnaby Final Report supplied by MPCA
Arsenic	7.830000	0.000008	from Burnaby Final Report supplied by MPCA
Beryllium	2.580000	0.000003	from Burnaby Final Report supplied by MPCA
Cadmium	13.530000	0.000014	from Burnaby Final Report supplied by MPCA
Chromium	92.540000	0.000093	from Burnaby Final Report supplied by MPCA
Cobalt	0.000000	0.000000	from Burnaby Final Report supplied by MPCA
Lead	163.000000	0.000163	from Burnaby Final Report supplied by MPCA
Manganese	271.000000	0.000271	from Burnaby Final Report supplied by MPCA
Mercury	0.734000	0.000001	from Burnaby Final Report supplied by MPCA
Nickel	16.550000	0.000017	from Burnaby Final Report supplied by MPCA
Selenium	4.800000	0.000005	from Burnaby Final Report supplied by MPCA

3) **SPECIAL WASTE FEEDRATE (C)**
For Determining Maximum Allowable Feedrate based on Air Impact Restrictions (C) 833 (#/hr)

4) DETERMINATION OF MAXIMUM ALLOWABLE ELEMENTAL CONCENTRATIONS BASED UPON ABOVE FEEDRATE (C)

Element	Tot.al Allowable Elemental Chargerate from Special Waste (#/hr) {(D) = {A)+ {B}*{C}}	Maximum Amount of Element Allowable in Special Waste (wt%) {{E}= {D)*{C))	Maximum Allowable Concentration in Special Waste (mg/kg) {(F}= {D}/{C}•1.0e6}	Result from Generator Analytical Testing Results (mg/kg) {G}	Maximum Allowable Feedrate for Element	1) Enter BTU 2) Enter desired feedrate 3) Maximum Allowable Elemental Concentrations for each element in Special Waste must not exceed Maximum Allowable Concentration to left (also highlighted orange)
Nitrogen	11.368792	1.3643%	13843		DONE	
Sulfur	8.793324	1.0552%	10552		DONE	
Chlorine	9.028714	1.0834%	10834		DONE	
Fluorine	0.061207	0.0073%	73		DONE	
Antimony	5.009959	0.6012%	6012		DONE	
Arsenic	0.013381	0.0016%	16.1		DONE	
Beryllium	0.004340	0.0005%	5.2		DONE	
Cadmium	0.804928	0.0966%	966		DONE	

Chromium	8.107441	0.9729%	9729		DONE	
Cobalt	0.219708	0.0264%	284		DONE	
Lead	0.194005	0.0233%	233		DONE	
Manganese	1.776751	0.2132%	2132		DONE	
Mercury	0.002648	0.0003%	3.2		DONE	
Nickel	1.327671	0.1593%	1593		DONE	
Selenium	0.046249	0.0055%	55		DONE	

Based on Air Impact Restrictions:	833	(#/hr)
Based on Heat Input and Air Impact Restrictions:	713	(#/hr)

	Basis for Control Efficiency	**Inlet**	**Outlet**	Units	Calculated Control Efficiency (%)
Nitrogen	FIRE Database Factor & Typical MSW Composition at 0.5wt% N/ton = 32.8 as NOx	32.80	3.16	#/Ton w/ SD/FF	90.37%
Sulfur	AP-42 & Fire for Mass Burn	3.46	0.55	#/Ton w/ SD/FF	83.99%
Chlorine	4/2-3/02 & 5/2/02 Perf Test	102.76	9.10	ppm@7% 02	91.14%
Fluorine	Set equal to Chlorine	102.76	9.10	ppm@7% 03	91.14%
Antimony	10/15/02 Perf Test	8188.00	469.00	ug/Nm"3 @ 7%02	94.27%
Arsenic	10/15/02 Perf Test	1243.00	51.80	ug/Nm"3 @ 7%02	95.83%
Beryllium	10/15/02 Perf Test	8.43	1.76	ug/Nm"3 @ 7%02	79.12%
Cadmium	10/15/02 Perf Test	1923.00	1.38	ug/Nm"3 @ 7%02	99.93%
Chromium	10/15/02 Perf Test	1224.00	43.50	ug/Nm"3 @ 7%02	96.45%
Cobalt	10/15/02 Perf Test	160.90	4.18	ug/Nm"3 @ 7%02	97.40%
lead	10/15/02 Perf Test	17196.00	1692.00	ug/Nm"3 @ 7%02	90.16%
Manganese	10/15/02 Perf Test	4323.00	127.30	ug/Nm"3 @ 7%02	97.06%
Mercury	10/15/02 Perf Test	429.00	120.30	ug/Nm"3 @ 7%02	71.96%
Nickel	10/15/02 Perf Test	488.00	21.20	ug/Nm"3 @ 7%02	95.66%
Selenium	10/15/02 Perf Test	131.00	17.70	ug/Nm"3 @ 7%02	86.49%

Other Items

Barium	10/15/02 Perf Test	944.00	110.80	ug/Nm"3 @ 7%02	88.26%
Copper	10/15/02 Perf Test	7682.00	421.00	ug/Nm"3 @ 7%02	94.52%
Vanadium	10/15/02 Perf Test	4554.00	143.60	ug/Nm"3 @ 7%02	96.85%
Zinc	10/15/02 Perf Test	180460.00	8954.00	ug/Nm"3 @ 7%02	95.04%

ISWMP Appendix G: Emissions Factor Information and Control Efficiency Sources

Burnaby Report

TABLE 7 ESTIMATED METAL CONCENTRATIONS IN THE WASTE BURNED DURING EACH RUN

ELEMENT	GRAND MEDIAN	RUN RESULTS (g/tonne -- as-sampled basis)								
		1	2	3	4	5	6	7	8	9
Al--aluminum	9654	11344	18176	15548	12050	6012	7942	7082	6883	9242
As--arsenic	7.83	8.12	13.85	10.34	13.27	8.48	3.94	5.60	8.60	9.57
B--boron	110.87	13i14	102.43	145.03	197.24	40.95	130.40	62.46	121.69	125.69
Ba--barium	51.96	56.93	57.83	54.34	78.66	35.31	57.25	43.43	53.29	54.31
Be--beryllium	2.58	1.59	3.04	1.92	2.45	2.45	2.08	2.41	2.74	2.98
Cd--cadmium	13.53	26.37	26.54	4.38	143.14	3.75	19.46	4.14	7.86	5.00
Cr--chromium	92.54	82.77	101.27	89.74	107.07	111.35	75.77	83.52	95.81	113.20
Cu--copper	141.96	136.23	101.41	112.38	704.93	62.22 •	142.10	73.37	162.83	304.9"1
Fe--iron	6794	5786	7534	6038	7827	6631	7194	6526	8112	7074
Hg--mercury	0.734	1.445	0.777	0.613	0.977	0.531	0.860	0.613	0.784	0.732
Mn--manganese	271	1137	326	195	534	162 • 291		193	306	231
Ni--nickel	16.55	21.37	16.22	20.84	21.21	11.55	19.90	14.84	16.89	15.07
Pb--lead	163	152	161	132	145	170	156	191	-155	180
Sb--antimony	33	53	29	36	3B	33	27	26	46	43
Se--selenium	4.80	15.16	0.19	8.02	0.12	7.64	0.75	1.45	9.71	B.41
Sn--tin	49	59	55	45	59	34	52	41	58	47
Zn--zinc	1873	1799	7604	6530	1629	1267	643	1394	258	643

MSW Composition Data

Energy from Waste

An introduction to its role and environmental benefits
Briefing Note 1
Written by Professor Andrew Porteous

INTRODUCTION
Within a national strategy of sustainable development, the following are the aims of waste management:

1) Avoid the creation of waste
2) Re-use unavoidable waste
3) Where re-use is not possible, recover (materials recycling and energy recovery by using the waste as fuel)
4) Lastly, if recovery of materials or energy is not appropriate, choose the disposal option which has the least environmental impact.

While some flexibility must be retained to take account of special circumstances, it is generally accepted that waste management practice should move up the hierarchy, subject to this being the best practicable environmental option for any particular waste stream.

Options should be assessed in terms of economic and environmental factors such as the use of fuel to transport the recovered materials to a processing plant, the energy required and the pollution caused in that reprocessing. Such assessments are not simple to make, but it is now accepted that 'cradle-to-grave' assessments of environmental impacts of product manufacture, use and disposal are all important parts of the equation when a waste management option is being considered.
None of 1-4 can be-practised in isolation, and even if our consumer society separates at source and recycles as much as possible (given the very severe market constraints for many recyclables now being realistically admitted) there will always be 'some' (i.e. about 80% of household waste) which requires disposal. This disposal can be direct to landfill or by incineration (combustion) with energy recovery in the case of household waste.

Incineration - to put it into context- is a vital waste disposal process. Some examples are: diseased cattle carcass disposal (e.g. BSE requires the disposal of over 20,000 carcasses per year), industrial wastes and clinical wastes (dressings, syringes, surgical waste), sewage sludge (we can't prevent its production!), disposal of the residues from de-inking newspapers (inks, glues and 'useless' fibres).

So, incineration has many applications and is an essential component of integrated waste management.

Without incineration, most wastes would have to go to landfill, or, for some industrial wastes, storage in depots, thereby posing a risk to health and safety through leakage, fire, tampering or other accident - a

There is a lot of paper and plastics. These are highly combustible and make excellent fuel if burnt properly in specially designed grate and boiler plant combinations known as 'energy from waste plants'.
Plastics – 8.3%
Unclassified – 4.3%

It is often thought that recycling will reduce the fuel value of MSW. However, as non-combustible bottles and cans as well as combustible paper and plastics are recycled, the fuel value of MSW is virtually unaffected by recycling - or even increased. Also, not all material can be recycled so there will always be plenty of MSW left for use as a fuel afterwards.

For those with a knowledge of chemistry, the Fact Box 6 gives the information needed by the fuel technologist to determine how much air is needed and how much heat will be released on its combustion in an energy from waste plant.

The important point to note is that the MSW has what is known as calorific value, or fuel content, of 10,120 MJ/kg. This means that the calorific value of house hold waste is approximately one third that of industrial coal, and therefore the 30 million tonnes of MSW per year generated in Britain, if it were all to be burnt, approximates to 10 million tonnes of coal in energy terms. Note that these wastes will continue to be produced year in year out. So, our household waste is, in effect, a renewable source of energy, and that is why it is included in the Government's renewable energy programme with a guaranteed premium market.

Fact Box 6: For Chemists Only Ultimate analysis and gross calorific value of MSW	
Carbon	22.6%

Hydrogen	2.8%
Oxygen	15.9%
Nitrogen	0.5%
Sulphur	0.2%
Water	31.2%
Ash and inerts	26.8%
Gross calorific value as fired, 10,120 MJ/kg (4,350 Btu/lb)	
Moisture	31.2 w/w
Combustibles	41.0%
Inerts	26.8%

The conclusion of this section is that recycling and energy from waste are entirely compatible and complementary activities. The energy from waste plant can bum the MSW left over from the recycling process and recover valuable energy too.

Fact Box 5: Combustion
Combustion - the chemical combination of oxygen with a fuel (e.g. paper, coal, wood) which is accompanied by the release of heat. The oxygen is provided by the combustion air supplied by fans to the burning waste.

ENERGY FROM WASTE PLANTS
The term energy from waste plant denotes that this is the purpose of today's modern, state of the art MSW combustion facility.

Britain's ageing incinerators are now being phased out or re-equipped to meet very much higher emission standards. These new standards must be met by December 1996 in the case of an existing plant wishing to stay operational after this date.

New energy from waste installations must comply immediately they begin operation, as does for example South East London Combined Heat and Power (SELCHP), Deptford, commissioned in 1994. The first of a new generation of energy from waste plants in Britain, SELCHP processes 420,000 tonnes of MSW per…\

AP-42

AP-42 Emission Factors for Mass Burn & Mass Burn Waterwall AP-42 Table 2.1-2, Table 2.1-4

Pollutant	Uncontrolled Emission Factor (Lb/Ton)	SD/FF Emission Factor (Lb/Ton)	Pollution Control Efficiency
PM	2.51E+01	6.20E-02	99.8%
As	4.37E-03	4.23E-06	99.9%
Cd	1.09E-02	2.71E-05	99.8%
Cr	8.97E-03	3.00E-05	99.7%
Hg	5.60E-03	2.20E-03	60.7%
Ni	7.85E-03	5.16E-05	99.3%
Pb	2.13E-01	2.61E-04	99.9%
SO2	3.46E+00	5.54E-01	84.0%

HCl	6.40E+00	2.11E-01	96.7%
NOx	3.56+00	3.56E+00	0.0%
CO	4.63E-01	4.63E-01	0.0%
CO2	1.97E+03	1.97E+03	0.0%
CDD/CDF	1.67E-06	6.61E-08	96.0%

Note: Red indicates EF matches Fire Data

Performance Testing

analytical methods to be used;
(3) a procedure for managing the waste and for identifying any special management requirements, and the rationale for accepting or rejecting a waste based on its analysis, volume, and characteristics;
(4) a procedure for inspecting industrial solid waste as it is delivered and the rationale for accepting or requiring further information and review of previously approved and unapproved waste as it is delivered.
B. The plan must address how the following categories of waste will be managed to comply with the requirements of item A, subitems (2) to (4):
(1) empty pesticide containers;
(2) asbestos;
(3) waste containing polychlorinated biphenyls at a concentration less than 50 ppm;
(4) spilled nonhazardous materials;
(5) rendering and slaughterhouse wastes;
(6) wastes that could spontaneously combust or that could ignite other waste because of high temperatures;
(7) foundry waste;
(8) ash from incinerators, resource recovery facilities, and power plants;
(9) paint residues, paint filters, and paint dust;
(10) sludges, including ink sludges, lime sludge, wood sludge, and paper sludge;
(11) fiberglass, urethane, polyurethane, and epoxy resin waste;
(12) spent activated carbon filters; and
(13) any other wastes that can be identified.
C. The owner or operator must indicate in the plan any wastes in item B or D that will not be accepted at the facility.
D. The owner or operator need not address the following wastes in the plan:
(1) paper and cardboard wastes from manufacturing processes or packaging;
(2) food and beverage packaging and handling materials;
(3) food not containing free liquids;
(4) aluminum, iron, steel, glass, wood, and hardened, cured plastic waste;
(5) dewatered sewage sludge that has been treated by a process to significantly reduce pathogens pursuant to parts 7040.0100 to 7040.4700;
(6) compost including sewage sludge compost produced in accordance with part 7035.2836;
(7) grit and bar screenings from a wastewater treatment plant; and
(8) ash from boilers and incinerators using only wood as a fuel source.
E. The owner or operator must amend the plan whenever the management practices or wastes identified in items A and B have changed. The owner or operator shall submit the amended plan to the commissioner for approval or disapproval.

Subp. 6. Household hazardous waste management. A solid waste management facility operator, not including a transfer facility operator, must develop a plan by June 30, 1992, addressing household hazardous wastes and must include in the

plan an explanation of how it will comply with the requirements of items A to C.

A. The facility operator must provide a summary of the approved county plan for household hazardous waste education programs and management and a discussion of how the operator will participate in county activities and coordinate with that plan.

B. The facility operator shall participate with the operator's county in education programs or projects which will promote the identification and reduction of household hazardous waste in the home and which will promote the proper handling and disposal of this waste. Such projects undertaken by the facility operator must be coordinated with county projects whenever possible and literature or other public information must be consistent with the county's household hazardous waste public education programs. In addition to activities conducted in conjunction with the county's program, facility activities must include:

(1) providing public information on dates and times of household hazardous waste collections in the facility's service area;

(2) providing public information to help identify household hazardous waste; and

(3) providing public information on ways to reduce household hazardous waste generation.

The information in subitems (1) to (3) must be made available at the facility for public use, for the county, and for other entities that are associated with solid waste management in the facility's service area.

C. Household hazardous waste that is segregated from other solid waste and managed at the facility must be managed according to part 7045.0310 or applicable hazardous waste generator standards.

STAT AUTH: MS s 115.03; 115A.97; 116.07

HIST: 13 SR 1150; 15 SR 2106; 16 SR 2321; 20 SR 715; 21 SR 327;
21 SR 1642
Current as of 12/17/01

7007.1250 INSIGNIFICANT MODIFICATIONS.

Subpart 1. When an insignificant modification can be made. The permittee may make a modification described in either item A or B at a permitted stationary source without getting a permit amendment, unless the modification is prohibited by subpart 2. However, if the modification triggers new monitoring, recordkeeping, or reporting requirements under applicable requirements or parts 7007.0100 to 7007.1850, the permittee shall initiate an administrative amendment under part 7007.1400 to include the new requirements no more than 30 days after making the modification.

A. Construction or operation of any emissions unit, or undertaking any activity, on the insignificant activities list in part 7007.1300, subparts 2 and 3.

B. Any modification that will:

(1) result in an increase of a regulated air pollutant which is not listed in table 1; or

(2) result in an increase of an air pollutant which is listed in table 1, but in an amount less than the corresponding threshold.

Table 1

Pollutant	Threshold (pounds per hour)
NOx	2.28
SO2	2.28
VOCs	2.28
PM-10	0.855
CO	5.70
Lead	0.025

For purposes of this subpart, whether or not the modification will cause an increase in emissions shall be calculated as described in part 7007.1200. An owner or operator may not use control equipment efficiencies for listed control equipment determined by part 7007.0070 to qualify for an insignificant modification, unless the specifications for the control equipment are from a control equipment manufacturer, as defined in part 7011.0060, subpart 3. Modifications which would otherwise be insignificant under this part may be title I modifications, for which a major amendment is required, using the methods of calculation required under title I of the act. Permittees are reminded to review the definition of title I modifications and the requirements of title I of the act.

Subp. 2. Insignificant modification exclusions. A modification may not be made under this part if the modification:
A. is a title I modification;
B. would result in the violation of a permit emissions limit or any other permit term;
C. is required to be authorized by a permit amendment under title IV of the act or Code of Federal Regulations, title 40, part 72, as amended;
D. is part of a single project, as described in subpart 5, which taken as a whole, would not be authorized under this part; or
E. is described under part 7007.1500, subpart 1 (Major permit amendment required).

Subp. 3. Recordkeeping requirements. Except as described in subpart 4, modifications authorized under this part may be made without providing notice to the agency. However, the permittee shall keep a contemporaneous record of the modification for all changes authorized under subpart 1, items A and B, except for those activities described in part 7007.1300, subpart 2. For changes authorized under subpart 1, item B, and part 7007.1300, subpart 3, item I, the permittee shall also keep calculations of the emissions increase as required by part 7007.1200, and a statement of the purpose for making the modification.

Subp. 4. Agency notification required. If a modification authorized under subpart 1, item B, together with other modifications made under subpart 1, item B, during the course of the permit term (or within a five-year period for a nonexpiring permit), have resulted in total increases of a pollutant in excess of four times the amount listed in subpart 1, item B, subitem (2), for that pollutant, the permittee shall notify the agency by seven working days after beginning actual construction of the last modification. The notice shall provide the information required to be kept in subpart 3 for each modification made under subpart 1, items A and B, except for those activities described in part 7007.1300, subpart 2, during the period in question. The notice shall also include a certification by a responsible official, consistent with part 7007.0500, subpart 3, that the modifications listed were not part of a single project, as described in subpart 5, which taken as a whole, would not be authorized under subpart 1, item B. After any such notice has been sent, the permittee shall continue to keep track of modifications made under subpart 1, item B, and the permittee shall notify the agency again if emissions increases from these additional modifications total more than four times the amount listed in subpart 1, item B, subitem (2).

Subp. 5. Determination of a single project. If two or more modifications made at a stationary source are part of a single project, the emissions increases from these modifications shall be considered in the aggregate for purposes of this part. Generally, modifications will be considered part of a single project when the usefulness of one modification depends substantially on the completion of the other modification or modifications. In determining whether modifications are part of a single project, the agency will consider the amount of time that elapses between modifications, whether they were planned at the same time, and whether the modifications share a common purpose.

Subp. 6. Enforcement action. If a permittee makes a modification the permittee believes to fall under this part and the agency subsequently determines that the modification does not fall under this part, the agency may take enforcement action against the permittee.

STAT AUTH: MS s 116.07
HIST: 18 SR 1059; 19 SR 1345; 20 SR 2316; 22 SR 1237; 23 SR 2224
Current as of 12/19/01

7045.0131 CHARACTERISTICS OF HAZARDOUS WASTE.

Subpart 1. In general. A waste which is not excluded from regulation as a hazardous waste under part 7045.0120 is a hazardous waste if it exhibits ignitability, corrosivity, reactivity, toxicity, lethality, or is an oxidizer, as described in subparts 2 to 7. A hazardous waste which is identified by a characteristic in this part is assigned every hazardous waste number that is applicable. This number must be used in complying with the notification requirements of section 3010 of the federal Resource Conservation and Recovery Act and all applicable recordkeeping and reporting requirements under parts 7023.900 to 7023.9050, 7045.0205 to 7045.0642 and 7045.1300, and chapter 7001. For purposes of this part, the commissioner shall consider a sample obtained using any of the applicable sampling methods specified in Code of Federal Regulations, title 40, part 260, Appendix I or part 261, Appendix II, as amended, to be a representative sample.

Subp. 2. Ignitability. A waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:
A. it is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flash point less than 60 degrees Celsius (140 degrees Fahrenheit), as determined by a Pensky-Martens Closed Cup Tester using the test method specified in standard D-93-79 or D-93-80 in the Annual Book of ASTM Standards, issued by the American Society for Testing and Materials (Philadelphia 1982), or a Setaflash Closed Cup Tester using the test method specified in standard D-3278-78 in the Annual Book of ASTM Standards, issued by the American Society for Testing and Materials (Philadelphia 1982), or as determined by an equivalent test method approved by the commissioner under the procedures set forth in part 7045.0075, subpart 1;
B. it is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard; or
C. it is an ignitable compressed gas as defined in Code of Federal Regulations, title 49, section 173.300, as amended, and as determined by the test methods described in that regulation or equivalent test methods approved by the commissioner under part 7045.0075, subpart 1.
A waste that exhibits the characteristic of ignitability has the hazardous waste number of D001.

Subp. 3. Oxidizers. A waste exhibits the characteristics of an oxidizer if a representative sample of the waste has the following properties:
A. it is an oxidizer as defined in Code of Federal Regulations, title 49, section 173.127, as amended; or
B. it readily supplies oxygen to a reaction in the absence of air. Oxidative materials include, but are not limited to, oxides, organic and inorganic peroxides, permanganates, perrhenates, chlorates, perchlorates, persulfates, nitric acid, organic and inorganic nitrates, iodates, periodates, bromates, perselenates, perbromates, chromates, dichromates, ozone, and perborates. Bromine, chlorine, fluorine, and iodine react similarly to oxygen under some conditions and are therefore also oxidative materials.
A waste that exhibits the characteristics of an oxidizer has the hazardous waste number of D001.

Subp. 4. Corrosivity. A waste exhibits the characteristic of corrosivity if a representative sample of the waste has any of the following properties:

A. It is aqueous and has a pH less than or equal to 2.0 or greater than or equal to 12.5, as determined by a pH meter using either the test method in the Test Methods for Evaluating Solid Waste, Physical/Chemical Methods issued by the United States Environmental Protection Agency, publication number SW 846 (First Edition, 1980 as updated by Revisions A

(August 1980), B (July 1981), and C (February 1982) or Second Edition, 1982) also described in Methods for Chemical Analysis of Water and Waste issued by the Environmental Monitoring and Support Laboratory, publication number 600/7-79-020 (March 1979), or an equivalent test method approved by the commissioner under the procedures set forth in part 7045.0075, subpart 1; or

B. It is liquid and corrodes steel (SAE 1020) at a rate greater than 6 35 mm (0.250 inch) per year at a test temperature of 55 degrees Celsius (130 degrees Fahrenheit) as determined by the test method specified in National Association of Corrosion Engineers Standard TM-01-69 as standardized in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, issued by the United States Environmental Protection Agency, publication number SW 846 (First Edition, 1980 as updated by Revisions A (August 1980), B (July 1981), and C (February 1982) or Second Edition, 1982) or an equivalent test method approved by the commissioner under the procedures set forth in part 7045.0075, subpart 1.
A waste that exhibits the characteristic of corrosivity has the hazardous waste number of D002.

Subp. 5. Reactivity. A waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:
A. it is normally unstable and readily undergoes violent change without detonating;
B. it reacts violently with water;
C. it forms potentially explosive mixtures with water;
D. when mixed with water, it generates toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment;
E. it is a cyanide or sulfide bearing waste which,
when exposed to pH conditions between 2.0 and 12.5 can generate toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment;
F. it is capable of detonation or explosive reaction
if it is subjected to a strong initiating source or if heated under confinement;
G. it is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; or
H. it is a forbidden explosive as defined in Code of Federal Regulations, title 49, section 173.51, as amended, a Class A explosive as defined in Code of Federal Regulations, title 49, section 173.53, as amended, or a Class B explosive as defined in Code of Federal Regulations, title 49, section 173.88, as amended.

A waste that exhibits the characteristic of reactivity has the hazardous waste number of D003.

Subp. 6. Lethality. Lethality is determined as follows:
A. A waste exhibits the characteristic of lethality as determined in item B, if a representative sample of the waste has any one of the following properties:
(1) an oral median lethal dose less than 500 milligrams of material per kilogram of body weight of test animal;
(2) a dermal median lethal dose less than 1,000 milligrams of material per kilogram of body weight of test animal;
(3) an inhalation median lethal concentration of
less than 2,000 milligrams of material per cubic meter of air, if the material or a component is in a form that may be inhaled as a dust or mist; or
(4) an inhalation median lethal concentration of less than 1,000 parts per million of material in air, if the material or component may be inhaled as gas or vapor.
B. Lethality shall be determined by applying knowledge of materials and processes used, including reasonably available information on the lethality of the components of the waste. If available information and knowledge are insufficient to reasonably determine lethality, the generator must notify the commissioner. The commissioner may order additional evaluation as specified in part 7045.0217. Additional evaluation may include testing according to the specifications of item C.

C. Lethality shall be determined as described in subitems (1) to (3):

(1) Oral median lethal dose shall be determined by a test in which the specified time is 14 days, the group of test animals is at least ten white laboratory rats of 200 to 300 grams each, half of which are male and half of which are female, and the route of administration is a single oral dose.

(2) Dermal median lethal dose shall be determined by a test in which the specified time is 14 days and the group of test animals is ten or more white rabbits, half of which are male and half of which are female, and the route of administration is a 24-hour exposure with continuous contact on bare skin.

(3) Inhalation median lethal concentration shall be determined by a test in which the specified time is 14 days, the group of the test animals is at least ten white laboratory rats of 200 to 300 grams each, half of which are male and half of which are female, and the route of administration is continuous respiratory exposure for a period of one hour.

D. A waste that exhibits the characteristics of lethality has the hazardous waste number MN0l.

Subp. 7. Toxicity. Toxicity is determined as follows:

A. A waste exhibits the characteristic of toxicity if, using the test methods described in Code of Federal Regulations, title 40, part 261, appendix II, as amended, or equivalent methods approved by the commissioner under the procedures in part 7045.0075, subpart 1, the extract from a representative sample of the waste contains any of the contaminants listed in subpart 8 at a concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering, is considered to be the extract.

B. A waste that exhibits the characteristic of toxicity has the hazardous waste number specified in subpart 8 which corresponds to the toxic contaminant causing it to be hazardous.

C. If the concentration of a constituent in a waste is known and that constituent is listed in subpart 8, the maximum possible concentration in the extract can be calculated on the assumption that 100 percent of the constituent will be extracted. If the calculated maximum possible concentration in the extract is less than the limit listed in subpart 8, the waste is not a hazardous waste because of the subject constituent.

Subp. 8. Maximum concentration of contaminants for the toxicity characteristic.

Hazardous Waste Number	Contaminant	CAS No.	Maximum Concentration (milligrams per liter)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	*200.0
D024	m-Cresol	108-39-4	*200.0
D025	p-Cresol	106-44-5	*200.0
D026	Cresol		*200.0
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	0.13
D012	Endrin	72-20-8	0.02

D031	Heptachlor (and its	epoxide) 76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	0.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0. 4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	5.0
D0l0	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

*If o-, m-, and p-cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 milligrams per liter.

STAT AUTH: MS s 116.07; 116.37

HIST: 9 SR 115; L 1987 c 186 s 15; 15 SR 1878; 16 SR 2239; 18 SR 614; 20 SR 715
Current as of 11/08/01

RESULTS OF THE OCTOBER 15, 2002 TRACE METALS ENGINEERING TEST
AT THE PERHAM RESOURCE RECOVERY FACILITY IN PERHAM, MINNESOTA

Parameter	Inlet		Outlet	
	Ug/Nm^3 @ 7% O_2	lb/hr	Ug/Nm^3 @ 7% O_2	lb/hr
Antimony	8188	0.17	469	0.0071
Arsenic	1243	0.26	51.8	0.00077
Barium	944	0.22	110.8	0.0017
Beryllium	8.43	0.00017	1.76	0.00003
Cadmium	1923	0.04	138.3	0.0021
Chromium	1224	0.025	43.5	0.00065
Cobalt	160.9	0.0033	4.18	0.00065
Copper	7682	0.16	421.0	0.0064
Lead	17196	0.37	1692	0.027

Manganese	4323	0.088	127.3	0.0019
Mercury	429	0.0090	120.3	21.2
Nickel	488	0.0099	21.2	0.00033
Selenium	131	0.0026	17.7	0.00027
Vanadium	4554	0.09	143.6	0.0022
Zinc	180460	3.63	8954	0.14

RESULTS OF THE APRIL 2-3 AND MAY 2, 2002 AIR EMISSION COMPLIANCE TEST ON THE WASTE COMBUSTOR AT THE PERHAM RESOURCE RECOVERY FACILITY

Parameter	**Limit**	**Average**
Particulate (Dry + Organic Wet Catch)		
(GR/DSCF @ 7% O_2)	0.08	0.0062
(LB/HR)	NA	0.8
Particulate (Dry Catch Only)		
(GR/DSCF @ 7% O_2)	NA	0.0056
(LB/HR)	NA	0.72
SO2		
(GR/DSCF @ 7% O_2)	NA	87.69
(LB/HR)	NA	10.27
Carbon Monoxide		
(GR/DSCF @ 7% O_2)	50	14.73
(LB/HR)	NA	0.68
HCl		
(Inlet ppm @ 7% O_2)	NA	102.76
(Stack ppm @ 7% O_2)	NA	9.10
(LB/HR)	NA	0.50
Removal Efficiency	NA	91.11
Trace Metals		
Cadmium		
(ug/dscm @ 7% O_2)	NA	< 0.17
(LB/HR)	NA	< 0.00001
Lead		
(ug/dscm @ 7% O_2)	NA	< 1.92
(LB/HR)	NA	< 0.00008
Mercury		
(ug/dscm @ 7% O_2)	1000	12.58
(LB/HR)	NA	000051
Dioxins		
(Total ng/dscm @ 7% O_2)	500	6.75

MPCA Air Permit Instructions FormI-05A

compliance demonstration requirements in that Rule. If you use the control efficiencies Minn.R.7011.0070, you must include the compliance demonstration requirements in that Rule in your Compliance Plan on Form CD-01. Note that you cannot use the control efficiencies in Minn.R.7011.0070 to calculate Potential-to-Emit to determine if you require a permit.

If you conducted a performance test which demonstrates a higher efficiency than Table GI-05A.1, and which was reviewed and accepted by the Agency, you may propose that efficiency. If you conducted a test which demonstrates a lower efficiency than Table GI-05A.1, you must use the lower efficiency to complete this and all other forms.

3i) Afterburner Combustion Parameters - Fill in the combustion parameters for afterburners only. The parameters of interest are the temperature and residence time of the unit. Please state the temperature in degrees Fahrenheit and the residence time in seconds. List the parameters in a column, filling in each square with only one parameter (i.e., minimum operating temperature and residence time). For example, list the unit's minimum operating temperature in the first row and the residence time in the second row. It is not necessary to repeat the other information in the other columns (i.e., equipment manufacturer's name, equipment model number, etc.). Recommended monitoring, recordkeeping, operation and maintenance guidelines for other types of control equipment are included in Tables CD-01.2 and CD-01.3 following in the instructions for completing Form CD-01.

TABLE GI-05A.1

CE Code	Control Device, Pollution Control Practice	Pollution Control Efficiency (%)						
		PM	PM_{10}	SOx	NOx	VOC	CO	Pb
001	Wet scrubber, high eff.	90	90	30	---	---	---	72
002	Wet scrubber, med. eff.	25	25	---	---	---	---	20
003	Wet scrubber, low eff.	20	20	---	---	---	---	16
004	Gravity collector, high eff.	4	4	---	---	---	---	3
005	Gravity collector, med. eff.	3	3	---	---	---	---	2
006	Gravity collector, low eff.	2	2	---	---	---	---	1
007	Centrifugal collector (cyclone), high eff.	80	80	---	---	---	---	64
008	Centrifugal collector (cyclone), med. eff.	50	50	---	---	---	---	40
009	Centrifugal collector (cyclone), low eff.	10	10	---	---	---	---	8
010	Electrostatic precipitator (boilers), high eff.	95	95	---	---	---	---	76
010	Electrostatic precipitator (other), high eff.	95	95	---	---	---	---	76
011	Electrostatic precipitator (boilers), med. eff.	50	50	---	---	---	---	40
011	Electrostatic precipitator (other), med. eff.	80	80	---	---	---	---	64
012	Electrostatic precipitator (boilers), low eff.	40	40	---	---	---	---	32
012	Electrostatic precipitator (other), low eff.	70	70	---	---	---	---	56
013	Gas scrubber (general)	---	---	30	---	---	---	---
014	Mist eliminator (v>250 ft/min), high vel.	10	10	---	---	---	---	8
015	Mist eliminator (v<250 ft/min), low vel.	5	5	---	---	---	---	4
016	Fabric filter (T>250 °F), high temp.	99	99	---	---	---	---	79
017	Fabric filter (180 °F >T>250 °F), med. Temp.	99	99	---	---	---	---	79

CE Code	Control Device, Pollution Control Practice	Pollution Control Efficiency (%)						
		PM	PM_{10}	SOx	NOx	VOC	CO	Pb
018	Fabric filter (T<180 °F), low temp.	99	99	---	---	---	---	79
019	Catalytic afterburner, no heat exch.	---	---	---	---	95	90	---
020	Catalytic afterburner, w/heat exch.	---	---	---	---	95	90	---
021	Direct flame afterburner, no heat exch.	---	---	---	---	95	99	---
022	Direct flame afterburner, w/heat exch.	---	---	---	---	95	99	---
023	Flaring	---	---	---	---	98	95	---
024	Modified furnace or burner design	---	---	---	20	---	---	---
025	Staged combustion	---	---	---	20	---	---	---
026	Flue gas recirculation	---	---	---	20	---	---	---
027	Reduced combustion - air preheat	---	---	---	20	---	---	---
028	Steam or water injection	---	---	---	20	---	---	---
029	Low excess - air firing	---	---	---	10	---	---	---
030	Fuel w/low nitrogen content	---	---	---	10	---	---	---
031	Air injection	---	---	---	---	---	---	---
032	Ammonia injection	---	---	---	---	---	---	---
033	Control of % O_2 in combustion Air	---	---	---	---	---	---	---
034	Wellman-Lord/sodium sulfite scrubbing	---	---	50	---	---	---	---
035	Magnesium oxide scrubbing	---	---	50	---	---	---	---
036	Dual alkali scrubbing	---	---	50	---	---	---	---
037	Citrate process scrubbing	---	---	50	---	---	---	---
038	Ammonia scrubbing	---	---	50	---	---	---	---
039	Cat. Oxidation - flue gas desulfurization	---	---	75	---	---	---	---
040	Alkalized alumina	---	---	75	---	---	---	---
041	Dry limestone injection	---	---	40	---	---	---	---
042	Wet limestone injection	---	---	80	---	---	---	---
043	Sulfuric acid plant- contact process	---	---	50	---	---	---	---
044	Sulfuric acid plant- double contact process	---	---	95	---	---	---	---
045	Sulfur plant	---	---	85	---	---	---	---
047	Vapor recovery system (Including condensers, hoods, other encl.)	---	---	---	---	85	---	---
048	Activated carbon adsorption	---	---	---	---	85	---	---
049	Liquid filtration system	50	50	---	---	---	---	40
050	Packed-gas absorption column	90	90	70	---	70	---	72
051	Tray-type gas absorption column	25	25	70	---	70	---	20
052	Spray tower	20	20	70	---	70	---	16
053	Venturi scrubber	90	90	30	---	70	---	72
055	Impingement plate scrubber	25	25	---	---	---	---	20
056	Dynamic separator (dry)	90	90	---	---	---	---	72
057	Dynamic separator (wet)	50	50	---	---	---	---	40
058	Mat or panel filter	92	92	---	---	---	---	74
059	Metal fabric filter screen (cotton gins)	10	10	---	---	---	---	8
060	Process gas recovery	---	---	---	---	95	99	---
061	Dust suppression by water spray, 10,000 gal/min	40	40	---	---	---	---	32
062	Dust suppression by chemical stabilizers or wetting agents, 350 gal/min	40	40	---	---	---	---	32
063	Gravel bed filter	---	---	---	---	---	---	---
064	Annular ring filter	80	80	---	---	---	---	64
065	Catalytic reduction	---	---	---	75	---	---	---
066	Molecular sieve	---	---	---	95	---	---	---

CE Code	Control Device, Pollution Control Practice	Pollution Control Efficiency (%) PM	PM10	SOx	NOx	VOC	CO	Pb
067	Wet lime slurry scrubbing	---	---	50	---	---	---	---
068	Alkaline fly ash scrubbing	---	---	50	---	---	---	---
069	Sodium carbonate scrubbing	---	---	50	---	---	---	---
070	Sodium-alkali scrubbing	---	---	50	---	---	---	---
071	Fluid bed dry scrubber	10	10	---	---	---	---	8
072	Tube and shell condenser	---	---	---	---	---	---	---
073	Refrigerated condenser	---	---	---	---	---	---	---
074	Barometric condenser	---	---	---	---	---	---	---
075	Single cyclone	10	10	---	---	---	---	8
076	Multiple cyclone w/o fly ash reinjection	80	80	---	---	---	---	64
077	Multiple cyclone w/ fly ash reinjection	50	50	---	---	---	---	40
080	Chemical oxidation	---	---	---	---	---	---	---
081	Chemical reduction	---	---	---	---	---	---	---
082	Ozonation	---	---	---	---	---	---	---
083	Chemical neutralization	---	---	---	---	---	---	---
084	Activated clay adsorption	---	---	---	---	---	---	---
085	Wet cyclone separator	50	50	---	---	---	---	40
086	Water curtain	10	10	---	---	---	---	8
099	Other control equipment or pollution control practices	---	---	---	---	---	---	---
		---	---	---	---	---	---	---
	Miscellaneous control devices	---	---	---	---	---	---	---
901	Moisture content of material, 2-3%	90	90	---	---	---	---	---
902	Moisture content of material, 4%	95	95	---	---	---	---	---
903	Moisture content of material, 5%	---	---	---	---	---	---	---
904	Moisture content of material, 6% or more	99	99	---	---	---	---	---
905	Paper filter (not accordion)	---	---	---	---	---	---	---
906	Fiberglass filter (with cardboard frame)	---	---	---	---	---	---	---
907	Fiberglass filter (without cardboard frame)	---	---	---	---	---	---	---
908	Andre -- cardboard Binks filter (accordion)	---	---	---	---	---	---	---
909	Roll media -- fiberglass tack filter (tacky on one side)	---	---	---	---	---	---	---
910	Split paper + polyester paint arrestor	---	---	---	---	---	---	---
911	Electrified filter bed	---	---	---	---	---	---	---

MR 7011.0070 - Listed Control Equipment and Control Equipment Efficiencies

7011.0070 LISTED CONTROL EQUIPMENT AND CONTROL EQUIPMENT EFFICIENCIES.

Subpart 1. Listed contro1 equipment efficiencies. Unless a part 70, state, or general permit specifies a different control efficiency, the owner or operator of a stationary source must at all times attain at least the control efficiency listed in Table A for each piece of listed control equipment at the stationary source. The applicable control efficiency for a type of listed control equipment and a given pollutant is determined by whether air emissions are discharged to the control equipment through a hood or through a total enclosure. The control equipment efficiencies in Table A do not apply to any hazardous air pollutant. The owner or operator of a stationary source that is subject to the control efficiencies given for hoods in Table A must have a testing company evaluate, on a form provided by the commissioner, whether the hood conforms to the design and operating practices recommended in "Industrial Ventilation - A Manual of Recommended Practice, American Conference of Governmental Industrial Hygienists," and must include with the permit application the certification required in subpart 3, if the hood exists at the time of application. If the

hood does not exist at the time of application, then the certification required in subpart 3 shall be sent to the agency within 30 days after start-up. The form used to evaluate whether the hood conforms to the design and operating practices shall contain the elements listed in subpart 4. If the hood design does not conform to the recommendations of the manual, the owner or operator shall submit a plan within 60 days of start-up describing either change of the hood design so that it does conform or how the hood capture efficiency shall be determined. Nothing in this part shall be construed to allow the owner or operator of an emission facility to violate an applicable requirement or compliance document. Hoods evaluated prior to the effective date of this part using a form whose contents differ from that in subpart 4 are not required to reevaluate their hoods, unless requested by the commissioner to demonstrate continued conformity with the design and operating practices described in the manual. A copy of the hood evaluation form shall be kept on site.

CONTROL EQUIPMENT EFFICIENCY-TABLE A

CONTROL EQUIPMENT EFFICIENCY-TABLE A

ID#	CONTROL EQUIPMENT DESCRIPTION	POLLUTANT	CONTROL EFFICIENCY	
			TOTAL	HOOD ENCLOSURE
	PM CONTROL CATEGORY-CYCLONES means a device where airflow is forced to spin in a vortex through a tube			

007	Centrifugal Collector (cyclone)-high efficiency means: a cyclonic device with parameters stated in drawing 1 and table 1	PM, PM-10	80%	64%
008	Centrifugal Collector (cyclone)-medium efficiency means: a cyclonic device with parameters stated in drawing 1 and table 1	PM, PM-10	50%	40%
009	Centrifugal Collector (cyclone)-low efficiency means: a cyclonic device with parameters stated in drawing 1 and table 1	PM, PM-10	10%	8%
076	Multiple Cyclone without Fly Ash Reinjection means: a cyclonic device with more than one tube where fly ash is not reinjected	PM, PM-10	80%	NA
077	Multiple Cyclone with Fly Ash Reinjection means: a cyclonic device with more than one tube where fly ash is reinjected	PM, PM-10	50%	NA
085	Wet Cyclone Separator or Cyclonic Scrubbers means: a cyclonic device that sprays water into a cyclone	PM, PM-10	50%	40%
012	PM CONTROL CATEGORY-ELECTROSTATIC PRECIPITATORS means: a control device in which the incoming particulate matter receives an electrical charge and is then collected on a surface with the opposite electrical charge			
	-assumed efficiency for boiler fly ash control	PM-10	40%	NA
	-assumed efficiency for other applications	PM-10	70%	56%
	PM CONTROL CATEGORY-OTHER CONTROLS			
016, 017, 018	Fabric Filter means: a control device in which the incoming gas stream passes through a porous fabric filter forming a dust cake	PM, PM-10	99%	79%
052	Spray Tower means: a control device in which the incoming gas	PM, PM-10	20%	16%

	stream passes through a chamber in which it contacts a liquid spray			
053	Venturi Scrubber means: a control device in which the incoming gas stream passes through a venturi into which a low pressure liquid is introduced	PM, PM-10	90%	72%
055	Impingement Plate Scrubber means: a control device in which the incoming gas stream passes a liquid spray and is then directed at high velocity into a plate	PM, PM-10	25%	20%
058A 058B	HEPA and Wall Filter means: a control device in which the exiting gas stream passes through a panel of coarse fibers. Other Wall Filters means removable panels for cleaning and replacement, or liquid curtains for particulate removal that provide little resistance to air flow	PM, PM-10	92%	74%
	VOC CONTROL CATEGORY			
019	Afterburners (thermal or catalytic oxidation) means: a device used to reduce VOCs to the products of combustion through thermal (high temperature) oxidation or catalytic (use of a catalyst) oxidation in a combustion chamber	VOC	95%	57%
023	Flaring or Direct Combustor means: a device in which air, combustible organic waste gases, and supplementary fuel (if needed) react in the flame zone (e.g., at the flare tip) to destroy the VOCs	VOC	98%	59%

Drawing 1

Graphic to go here currently not available

Table 1
Cyclone Type

Ratio Dimensions	High Efficiency	Medium Efficiency	Low Efficiency
Height of inlet, H/D	$\leq$0.44	>0.44 and <0.8	$\geq$0.8

Width of inlet, W/D	≤0.2	>0.2 and <0.375	≥0.375
Diameter of gas exit, D_e/D	≤0.4	>0.4 and <0.75	≥0.75
Length of vortex finder, S/D	≤0.5	>0.5 and <0.875	≥0.875

If one or more of the "ratio dimensions," as listed in table 1, are in a different efficiency category (high, medium, low), then the lowest efficiency category shall be applied.

Subp. 2. Alternative contro1 equipment efficiencies;
contro1 efficiencies for hazardous air po11utants. The owner or operator of a stationary source may use an alternative control equipment efficiency for the control equipment listed in subpart 1, if the actual control efficiency has been verified by a performance test approved by the commissioner under parts 7017.2001 to 7017.2060. The owner or operator of a stationary source may use a control equipment efficiency for listed control equipment for a hazardous air pollutant, if the control efficiency has been verified by a performance test approved by the commissioner under parts 7017.2001 to 7017.2060. The request for the alternative control efficiency may be made through a permit application for a part 70, state, registration, or general permit, or in a required notice or application submitted under parts 7007.1150 to 7007.1500. The owner or operator of a stationary source must attain at all times the alternative control efficiency for a piece of listed control equipment at the stationary source established under this subpart.

Subp. 3. Certification for hoods. The certification required by subpart 1 for hoods shall be signed by the responsible official, and shall state as follows:
"I certify under penalty of law that the aforementioned hood(s) has (have) been evaluated under my direction or supervision by qualified personnel and that, to the best of my knowledge and belief, the (each) hood conforms to the design and operating practices recommended in "Industrial Ventilation - A Manual of Recommended Practice, American Conference of Governmental Industrial Hygienists.""

Subp. 4. Contents of hood eva1uation form. The hood evaluation form required in subpart 1 shall include:
A. hood dimensions recommended by the manual;
B. design capture velocity and justification for use of this velocity and a list of the manual pages relied on;
C. minimum recommended air flow into hood;
D. recommended hood face velocity or slot velocity, and, if applicable, plenum and duct velocity;
E. capture velocity test plan; and
F. actual values of design parameters listed in items A to D, as well a fan rotation speed or fan power draw as determined through testing.

STAT AUTH: MS s 116.07

HIST: 19 SR 1345; 20 SR 2316; 22 SR 1237; 23 SR 2224
Current as of 04/12/00

ISWMP Appendix H: Total Composition Information from MPCA

TABLE 6 METAL CONCENTRATIONS IN INDIVIDUAL WASTE COMPONENTS

Group	Major category	Minor category	Sub-1	ELEMENTAL COMPOSITION IN g/TONNE OF COMPONENT – AS-SAMPLED BASIS																
				Al	As	B	Ba	Be	Cd	Cr	Cu	Fe	Hg	Mn	Ni	Pb	Sb	Se	Sn	Zn
paper	fine/computer/office			3,263	1.3	2.2	7.7	0.1	0.1	3.4	8	606	0.3	24.6	7.5	4.5	0.5	0.25	8	206
	books			2,874	0.4	37.5	62.5	0.01	0.4	5.7	40	399	0.2	48.2	1.4	0.505	0.25	0.13	24	66
	magazines	glued		9,808	1.1	2.5	24.2	7.4	0.001	16.6	26	771	0.3	50.9	17.5	8.4	1.6	0.06	56	56
		not glued		22,410	1.6	7.5	34.9	0.2	0.3	5.6	37	4,153	0.3	50.9	2.2	3.9	98.9	0.13	31	16
	laminates	wax/plastic		5,600	0.7	3.7	22.3	0.1	0.3	3.2	7	1,990	0.1	25.5	5.4	7.1	3.7	0.05	12	16
		foil		101,992	0.8	15.4	23.1	7.2	0.1	44.6	205	2,048	0.1	64.5	6.7	92.3	20.2	0.02	11	119
	newsprint	glued		3,772	0.8	5.1	9.5	0.3	0.1	1.3	10	227	0.3	19.5	4.3	2.4	1.2	0.11	18	6
		not glued	b&w	4,200	0.7	5.9	15.4	1.0	0.1	3.6	15	861	2.9	43.0	6.2	7.2	2.5	0.11	24	19
			colour	4,202	0.6	16.5	23.2	6.3	0.1	215.1	36	1,395	0.3	61.9	106.5	8.7	1.8	0.07	25	29
	browns	corrugate		1,030	0.6	3.1	6.3	0.3	0.1	1.8	3	336	0.1	17.3	3.6	3.6	1.8	0.04	4	10
		kraft		1,567	0.6	4.7	11.3	1.0	0.1	4.7	11	625	0.5	29.1	7.7	9.3	1.6	0.06	15	32
		box board		3,319	0.7	6.0	31.0	1.1	0.2	5.4	12	839	0.2	41.0	6.9	12.9	2.8	0.04	31	23
	residual mixed			1,505	1.2	6.6	14.3	0.1	1.7	33.0	24	1,500	0.4	51.2	7.3	229.4	5.0	0.03	25	61
plastic	film	colour		3,236	0.5	13.7	189.8	0.1	6.8	115.1	25	1,157	0.2	34.1	5.0	361.6	27.2	0.01	92	1,138
		flexible		940	0.7	29.7	11.0	0.1	2.8	88.0	20	1,068	0.2	33.0	3.9	279.3	10.7	0.02	31	67
		rigid		12,481	0.3	5.4	126.5	0.1	37.2	119.8	75	846	0.1	53.0	27.2	33.7	17.1	0.04	179	52
	food/ beverage/ household	1 (pet)		1,384	0.6	193.5	6.0	1.9	5.3	18.7	31	1,927	0.2	60.0	8.3	61.5	174.1	0.03	8	37
		2 (hdpe)		2,438	0.5	29.4	53.5	2.7	2.9	13.0	24	1,740	0.2	56.5	7.0	63.8	52.0	0.05	14	142
		3 (pvc)		90	0.0	7.2	0.6	0.02	4.5	2.8	2	216	0.1	11.7	2.8	12,150	29,700	0.005	17	3
		4 (ldpe)		242	0.2	12.0	5.0	4.0	2.5	4.7	10	129	0.1	9.4	4.2	56.9	16.0	0.03	0.01	59
		5 (pp)		736	0.5	5.3	4.5	0.04	1.9	31.6	16	1,064	0.1	31.9	6.0	59.3	31.3	0.03	18	40
		6 (ps)		36	0.2	3.8	3.4	0.03	4.7	7.1	9	170	0.1	3.6	3.7	25.0	44.0	0.02	25	59
		nonidentifiable		19,668	1.2	20.0	117.9	0.5	79.3	44.1	37	2,427	0.4	41.7	36.2	157.7	101.3	0.13	95	272
	housewares	clear		406	0.1	0.5	16.5	0.5	0.9	6.4	7	298	0.1	6.1	10.5	61.7	24.3	0.02	316	104
		white		836	0.2	7.1	6.5	1.5	2.5	595.2	44	9,006	0.2	242.5	140.4	41.5	24.9	0.02	56	129
		blue		1,666	3.1	16.9	563.0	0.03	268.7	6.7	60	251	0.1	11.2	16.3	64.3	90.3	0.03	106	74
		yellow		826	0.5	6.1	227.1	0.1	164.6	1,287	17	931	0.1	22.7	9.0	12,478	62.9	0.06	145	277
		other		1,154	0.5	5.9	166.1	0.5	100.9	339.3	29	634	0.3	14.1	2.6	647.5	254.7	0.02	68	199
	toys and other			565	0.5	9.5	83.1	1.5	78.5	229.1	56	26,548	0.1	219.5	27.7	102.6	80.4	0.03	66	348
	video tape/film			136	14.3	64.7	27.4	0.0	2,195	94.1	36	179,400	0.2	356.1	17.5	562.0	211.7	0.02	60	774
organics	yard & garden	lawn/plant		15,547	7.3	527.1	132.6	2.6	8.9	101.3	640	16,064	1.4	486.4	23.0	153.6	52.2	0.07	79	345
		branches		4,328	0.9	22.8	84.2	9.7	1.1	24.1	45	4,062	0.4	164.7	10.8	61.9	7.8	0.04	19	124
	food waste	organic		2,910	1.2	326.7	17.4	0.9	2.0	22.6	43	3,154	0.3	101.2	4.5	72.0	12.5	0.05	56	103
	wood	finished		431	0.1	14.6	46.3	18.1	1.1	113.9	109	36,387	0.2	256.3	6.3	562.9	0.2	0.02	18	117
		unfinished		415	34.0	20.9	27.9	17.4	6.04	56.1	46	718	0.4	117.2	0.8	324.3	0.5	0.01	31	209
	textiles			884	0.4	6.9	23.0	2.2	2.8	440.1	67	1,245	1.1	36.7	0.8	1125.2	96.4	0.03	43	142
	footwear			2,648	0.7	3.6	91.9	2.7	11.8	1,831	25	849	0.1	23.2	8.5	133.8	4.8	0.03	37	784
metals	ferrous	beer & soft drink		120,400	6.8	123.9	43.0	0.004	61.9	302.7	323	33,250	38.4	4,890	186.9	2200.5	56.8	0.06	686	885
		food		1,348	7.0	181.0	1.7	0.004	43.1	186.8	99	42,215	5.6	3,459	180.4	344.3	58.2	0.04	725	1,566
		band & strap		626	40.9	372.9	2.2	0.1	13.0	492.0	119	820,000	0.02	14,000	41.7	595.9	163.0	0.09	216	35
		electric motor		181,300	9,460	96.0	1,274	0.0	8.1	259.1	744,500	196,800	5.4	1,056	36.9	509.6	74.5	290.58	157	7,332
	non-ferrous	beer		750,000	0.2	9.0	67.0	0.01	3.0	95.0	1,141	3,412	0.3	7,694	27.9	58.0	20.0	0.01	60	172
		soft drink		565,563	0.4	19.7	157.7	0.3	6.0	89.3	1,094	4,108	0.4	7,307	19.1	32.3	18.0	0.01	91	248
		food		731,000	7,215	17.2	10.3	0.4	1.7	172.0	645	30,130	0.2	3,069	34.1	95.5	25.8	16.34	114	445
		manufacturing		370,000	199	20.0	34.0	0.1	5.6	1,554	184	6,800	0.2	132	7.2	94.6	22.0	3.00	297	400,000
		foil/pack		337,500	0.8	15.0	27.0	0.2	51.0	134.3	279	8,230	0.8	2,347	40.4	10,564	0.03	0.01	53	120
		other		650,000	18,369	20.0	12.0		2.0	200.0	750	33,000	0.2	3,537	0.0	1111.0	30.9	19.00	122	318
glass	combined	clear		13,442	1.0	88.8	340.6	1.0	4.8	28.0	22	2,333	0.2	179	10.1	1109.3	144.7	0.77	50	60
		green		10,819	9.8	44.6	466.6	0.4	0.3	943.0	81	2,500	0.1	250	62.7	20.0	36.5	0.06	166	21
		brown		9,796	8.9	29.2	190.7	0.2	1.7	48.2	92	7,563	0.8	256	22.8	1103.1	23.4	0.48	27	23
		other colour		8,058	0.4	21.5	784.7	0.01	5.4	91.5	29	1,921	0.1	76	12.5	90.0	154.3	0.18	74	1,671
inorganics	light construction	rock/sand/grit/ concrete/ceramic		71,874	8.0	2,850	807.8	0.01	20.0	187.0	134	47,649	0.3	1,074	153.3	1,343	200.4	0.79	123	5,116
		drywall/plaster		490	0.6	258.0	31.0	0.9	2.0	8.5	7	1,090	0.3	21.0	4.2	38.0	34.0	0.20	26	21
		insulation	fibres	977	0.7	63.6	296.7	0.1	0.06	14.1	46	819	1.1	102.5	8.2	40.6	5.2	0.53	114	12
		other		3,150	17.1	13.2	61.1	0.2	0.4	34.0	112	319	0.1	111.2	23.5	30.1	0.8	0.003	59	57
small appliances	electrical parts	plastic		34,368	777.1	11.5	1.4	0.04	3.6	251.3	915	550	0.1	29.6	4.4	662.3	4,602	3,045	50	83
household hazardous	batteries	carbon		6,500	2.9	15.0	14.0	0.3	31	39.0	140	12,000	20.5	170,000	276.0	43.0	23	0.04	334	63,000
		lead		10,000	4.4	70.0	12.0	0.0	120,000	84.0	33	190,000	0.3	2,788	313.0	113.0	670	0.11	53	885
		alkaline		615	1.0	59.0	7.6	0.3	1,840	74.0	12,000	160,000	242.0	170,000	726.0	143.0	50	0.02	342	140,000
fines				11,000	8.6	45.5	46.0	0.2	4.4	115.0	243	17,500	1.4	532	53.6	256.5	45	9.13	70	854

ISWMP XIV. Appendix I: Relevant Minnesota Rules and Statutes

Minnesota Statutes Chapter 115A. 03 Definitions.
Sub. 13a. Industrial waste. "Industrial waste"
means solid waste resulting from an industrial, manufacturing, service, or commercial activity that is managed as a separate waste stream.

Sub. 24a. Problem material. "Problem material"
means a material that, when it is processed or disposed of with mixed municipal solid waste, contributes to one or more of the following results:
(1) the release of a hazardous substance, or pollutant or contaminant, as defined in section 115B. 2, subdivisions 8, 13, and 15;
(2) pollution of water as defined in section 115.01, subdivision 13;
(3) air pollution as defined in section 116.C6, subdivision 4; or
(4) a significant threat to the safe or efficient operation of a solid waste facility.

Minnesota Statutes Chapter 115A. 03 Definitions.
Subd. 22. Solid waste. "Solid waste" means garbage, refuse, sludge from a water supply treatment plant or air contaminant treatment facility, and other discarded waste materials and sludges, in solid, semisolid, liquid, or contained gaseous form, resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include hazardous waste; animal waste used as fertilizer; earthen fill, boulders, rock; sewage sludge; solid or dissolved material in domestic sewage or other common pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents or discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended, dissolved materials in irrigation return flows; or source, special nuclear, or
by-product material as defined by the Atomic Energy Act of 1954, as amended.

7011.1245 GENERAL WASTE COMBUSTOR FACILITY REQUIREMENTS.

The owner or operator of a waste combustor shall design, construct, and operate the facility in compliance with the solid waste management requirements as set forth in items A to H. Plans required in the items in this part shall identify those required portions of the plan which are not applicable.
A. security requirements in part 7035.2535, subpart 3;
B. general inspection requirements in part 7035.2535, subpart 4;
C. household hazardous waste management requirements of part 7035.2535, subpart 6;
D. emergency preparedness and prevention plans and emergency procedures shall be prepared in accordance with parts 7035.2595 and 7035.2605;
E. contingency action plans in part 7035.2615;
F. closure plans in part 7035.2625 and closure procedures in part 7035.2635;
G. solid waste transfer facility requirements as required in part 7035.2865; and
H for waste combustors accepting infectious wastes, infectious waste management requirements of parts 7035.9100 to 7035.9150.

STAT AUTH: MS s 116.07
HIST: 18 SR 2584
Current as of 04/12/00

7011.1250 INDUSTRIAL SOLID WASTE MANAGEMENT PLAN.

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

Subp. 2. Contents of plan. following additional categories to comply with the requirements item A, subitems (2) to (4), as the following solid wastes will be managed to comply with the requirements of part 7035.2535, subpart 5, item A, subitems (2) to (4), as well as state whether each of the following solid wastes will be accepted at the facility:
A. spilled fossil fuels and the sorbents used to collect the spilled fossil fuels;
B. infectious and pathological wastes;
C. media contaminated with oil;
D. problem materials as defined in Minnesota Statutes, section 115A.03, subdivision 24a; and
E. any other solid wastes that can be identified that would adversely impact waste combustor operations or result in environmental and health problems if combusted.

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

STAT AUTH: MS s 116 .07
HIST: 18 SR 2584
Current as of 04/12/00

7035.2535 GENERAL SOLID WASTE MANAGEMENT FACILITY REQUIREMENTS.

Subpart 1. Unacceptable wastes. The owner or operator of a solid waste management facility must not accept the following wastes for treatment, storage, processing, or disposal:
A. hazardous wastes, categorized according to
Minnesota Statutes, chapters 115B and 116, and Minnesota Rules, chapter 7045, or wastes that have not been evaluated pursuant to parts 7045.0214 to 7045.0217;
B. sewage sludge, septic tank pumpings, sewage sludge compost, or sewage unless it has been treated or will be treated by a process to significantly reduce pathogens pursuant to part 7035.2835 and chapter 7041;
C. infectious wastes, unless approved by the agency;
D. used oil, except as provided in subpart 5, item B;
E. radioactive waste;
F. wastes containing free liquids; or
G. free liquids.

Subp. 2. Required notices. The owner or operator of a solid waste management facility must notify the agency before transferring ownership or operation of a solid waste management facility during its operating life or during the postclosure care period. The owner or operator must also notify the new owner or operator in writing of the requirements of parts 7035.2525 to 7035.2915 and existing permit conditions. No ownership or operation transfer may occur without a permit modification as required in part 7001.0190, subpart 2. The facility must be in substantial compliance with all agency rules before the agency will approve a transfer.

Subp. 3. Security. During the active life of the solid waste management facility, the closure period, and postclosure care period, as required, the owner or operator must prevent, by use of a fence or similar device, the unauthorized entry of persons or livestock onto the facility, unless the owner or operator demonstrates to the commissioner that:
A. physical contact with the waste, structure, or equipment at the facility will not injure unknowing or unauthorized persons or livestock that could enter the facility; and
B. disturbance of the waste or equipment will not cause a violation of parts 7035.2525 to 7035.2915.

Subp. 4. General inspection requirements. General inspection requirements include the information required in items A to E.
A. The owner or operator must inspect the facility
for malfunctions, deterioration, or discharges that may result in either the release of pollutants to the environment or a threat to human health. The owner or operator must conduct these inspections according to the schedule developed under item B.

B. The owner or operator must develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment used to prevent, detect, or respond to environmental or human health hazards. The owner or operator must retain a copy of the schedule at the facility. The schedule must identify the types of problems to look for during the inspection including inoperative sump pumps, damaged well casings, clogged leachate collection systems, eroding dikes, and damaged survey markers.

C. The owner or operator shall submit the inspection schedule with the permit application. The commissioner must evaluate the schedule to ensure that it will result in protection of human health and the environment. The owner or operator must revise the schedule when conditions at the site warrant revisions and whenever the facility design is modified.

D. The owner or operator must remedy any deterioration or malfunction of equipment or structure within two weeks after an inspection, or as approved by the commissioner based on the nature of the problem, availability of materials, and other factors that influence repair efforts.

E. The owner or operator must record inspections in an inspection log or summary and must keep these records for at least five years after the date of inspection. If the owner or operator is involved in an enforcement action, all records must be retained until the action is resolved. The records must include the date and time of the inspection, the name of the inspector, the observations made, and the date and nature of any repairs or other actions taken.

Subp. 5. Industrial solid waste management. All industrial solid waste delivered to a solid waste management facility must be managed by the owner or operator to protect human health and the environment. The industrial solid waste management plan required under part 7001.3300 must address items A to C, except that the industrial solid waste management plan for a municipal solid waste combustor ash land disposal facility need not comply with items B and C.

A. The plan must include a discussion of how the owner or operator will manage all industrial solid wastes received at the facility. The owner or operator must specify:

(1) a procedure for notifying industrial solid waste generators of the facility operating requirements and restrictions, including the requirements imposed on haulers serving the facility, the steps required of generators submitting a request for waste management, and the measures to be taken to inform haulers and generators of the facility requirements;

(2) a procedure for evaluating waste characteristics, including the specific analyses that may be required for specific wastes, and the criteria used to determine when analyses are necessary, the frequency of testing, and the

(Last page of the Industrial Solid Waste Management Plan submitted by PRRF)

Appendix G. Ash Management Plan

INTRODUCTION

This Ash Residue Management Plan describes the methods and procedures PRRF shall use in fulfillment of the requirements of the solid waste regulations.

This Plan covers PRRF and does not cover any obligations, which may exist under any landfill permits or consent orders, for which the plant is not the permittee.

This plan shall be incorporated into the PRRF Operation Plan.

ON-SITE RESIDUE MANAGEMENT

Boiler fly-ash from the superheater and the economizer hoppers is discharged via flap-gates into the ash discharger.

Baghouse fly-ash is discharged from the hopper into a screw conveyer system which discharges into #1 waste drag chain conveyor.

The bottom ash consisting of burned out waste residues and grate siftings is water quenched and discharged by the waste drag chain conveyor associated to that unit.

The ash is carried via a drag chain to the magnetic separators to extract and divert metals for recovery. The metal pieces are deposited into a roll off container located in the ash room for pick-up. The ash is then deposited into a roll-off box for pick up.

ASH RESIDUE DISPOSAL

The residue, which exits the boiler, is divided into two streams. First, the main ash stream passes through the magnetic separators and removes large material (ferrous and non-ferrous). The main ash stream proceeds into the roll-off containers for pick.

The trucks proceed to the Landfill, where they are weighed and emptied into a monofill. The truck will not leave the Landfill with an ash load.

The side stream from the magnetic separators is picked for recoverable materials, which are accumulated in an open top container. The container materials are carted away from the Site by a contracted truck for delivery to a salvager. Non-ferrous materials are carted to the Landfill.

The ferrous recovery system material, which is deposited in the ferrous containers, is hauled by a contracted truck to a salvager.

The disposal trucks are leak resistant and have tarps to prohibit dusting. The residue arrives at the landfill in a semi-wetted state consequently very little airborne material is released as the trucks unload into the Landfill.

Appendix H. Waste Composition Study*

*Also included in the Tempo central file as a .pdf document

SOLID WASTE COMPOSITION STUDY RESULTS

PERHAM RESOURCE RECOVERY FACILITY

AUGUST 31, 2023

Mr. Brian Schmidt
Perham Resource Recovery Facility 201 6th Avenue NE
Perham, MN 56573

Re: 2023 Solid Waste Composition Study Results
Dear Mr. Schmidt:

This report summarizes the results from the Solid Waste Composition Study (Study) performed by your facility during the week of July 24 to July 28, 2023.

For each of the 40 samples sorted, results were tabulated and averaged to determine the overall weight percentages of the fractions separated from the waste streams. The field data sheets from the Study are included in Appendix D. Tabulated results and numerical analysis are included in Appendix A. Results are summarized as follows for the combustible and non-combustible waste fraction groupings in Table 1:

Table 1: Weight Fractions of each Fraction Grouping Present in MSW

Total Combustibles

Item	Lbs	wt%
Paper	1,708.2	18.2%
Cardboard	855.6	9.1%
Plastic	2,105.2	22.5%
Organics	3,211.0	34.3%
Textiles	432.1	4.6%
Total	**8,312.0**	**88.8%**

Total Non-Combustibles

Item	Lbs	wt%
Various	**1,048.5**	**11.2%**

Total	**9,360.5**	**100.0%**

Results for each of the individual fractions are presented below in Table 2:

Table 2: Weight Fractions of Each Individual Fraction Present in MSW

Fraction	Samples	Top Fines	Bottom Fines	Non-Separables	Total (Lbs)	Wt%

Paper - Newsprint (ONP)	21.0				21.0	0.2%
Paper - Mixed Office (SOP)	114.6				114.6	1.2%
Paper - Other (Magazines, Books, etc.)	113.2				113.2	1.2%
Paper - Compostable	1,342.9	116.5	0.0	0.0	1,459.4	15.6%
Cardboard - Corrugated (OCC)	462.7				462.7	4.9%
Cardboard - Boxboard / Paperboard	140.2				140.2	1.5%
Cardboard - Cartons Gable Top & Aseptic	33.2				33.2	0.4%
Cardboard - Other	219.5	0.0	0.0	0.0	219.5	2.3%
Plastic #1 - PET	142.2				142.2	1.5%
Plastic #2 - HDPE	116.6				116.6	1.2%
Plastic #3 - PVC	19.4				19.4	0.2%
Plastic #5 - PP	53.9				53.9	0.6%
Plastic - Bags & Stretch Film	948.1				948.1	10.1%
Plastic - Other	740.6	46.5	0.0	37.9	825.0	8.8%
Organics - Yard Waste	725.9				725.9	7.8%
Organics - Food Waste	1,433.8				1,433.8	15.3%
Organics - Other	864.5	13.7	136.2	36.9	1,051.3	11.2%
Textiles	432.1				432.1	4.6%
Ferrous Metal - Cans	95.4				95.4	1.0%
Ferrous Metal - Other	79.9	0.0	0.0	42.5	122.4	1.3%
Non-Ferrous Metal - UBC (Cans)	108.2				108.2	1.2%
Non-Ferrous Metal - Other	94.5	0.0	0.6	16.9	112.0	1.2%
Glass	132.1	0.0	2.5	0.0	134.6	1.4%
Inorganic Material	274.6	1.6	67.1	5.6	348.9	3.7%
Electronics - Regulated (Video Screens)	0.7				0.7	0.0%
Electronics - Non-Reg (Circuit Boards)	20.1				20.1	0.2%
Electronics - Small Appliances	50.2				50.2	0.5%
Household Hazardous Waste - General	3.5				3.5	0.0%
Household Hazardous Waste - Batteries	43.7				43.7	0.5%
Problem Wastes (Car Seats, etc.)	0.0				0.0	0.0%
Special Wastes (Tires, etc.)	2.3				2.3	0.0%

Table 2: Weight Fractions of Each Individual Fraction Present in MSW (Continued)

Fraction	Samples	Top Fines	Bottom Fines	Non-Separables	Total (Lbs)	Wt%
Solid Wastes Containing Mercury	6.5	0.0	0.0	0.0	6.5	0.1%
Total	**8,836.1**	**178.3**	**206.3**	**139.8**	**9,360.5**	**100.0%**

Samples were submitted to MVTL Laboratories for analysis to determine proximate analysis, ultimate analysis and heating value of the combustible fractions. MVTL homogenized and split samples pursuant to the Solid Waste Composition Study procedures. Four individual samples were analyzed. Analytical results are included in Appendix B.

A Summary of the proximate analysis, ultimate analysis, and heating value analytical results are presented below in Tables 3, 4, and 5, respectively. Calculations are included in Appendix C.

Table 3: Proximate Analysis (Combustible Fractions Only)

Analyte	Units	Sample 1	Sample 2	Sample 3	Sample 4	Average
Total Moisture	wt%	29.46%	29.63%	29.60%	29.60%	**29.57%**
Ash	wt%	5.68%	4.87%	3.68%	4.16%	**4.60%**
Volatile Matter	wt%	61.88%	61.53%	62.29%	62.63%	**62.08%**
Fixed Carbon (By Difference)	wt%	2.98%	3.97%	4.43%	3.61%	**3.75%**
Total		**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Table 4: Ultimate Analysis (Combustible Fractions Only)

Analyte	Units	Sample 1	Sample 2	Sample 3	Sample 4	Average
Ash	wt%	5.68%	4.87%	3.68%	4.16%	**4.60%**
Carbon	wt%	36.66%	37.07%	37.16%	38.56%	**37.36%**
Hydrogen	wt%	8.34%	8.44%	8.36%	8.62%	**8.44%**
Nitrogen	wt%	0.61%	0.53%	0.63%	0.58%	**0.59%**
Total Sulfur	wt%	0.06%	0.06%	0.05%	0.07%	**0.06%**
Chlorine	wt%	0.16%	0.15%	0.14%	0.12%	**0.15%**
Oxygen (By Difference)	wt%	48.49%	48.88%	49.98%	47.89%	**48.81%**
Total		**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Table 5: Heating Value (Combustible Fractions Only)

Analyte	Units	Sample 1	Sample 2	Sample 3	Sample 4	Average
Heating Value	Btu/lb	**6,050**	**6,273**	**6,043**	**6,825**	**6,298**

Table 6: Proximate Analysis (As Received)

Analyte	Result as Received
Total Moisture	**26.26%**
Ash	**4.08%**
Volatile Matter	**55.13%**
Fixed Carbon (By Difference)	**3.33%**
Non-Combustibles	**11.20%**
Total	**100.00%**

Table 7: Ultimate Analysis (As Received)

Analyte	Result as Received
Ash	**4.08%**
Carbon	**33.18%**
Hydrogen	**7.49%**
Nitrogen	**0.52%**
Total Sulfur	**0.05%**
Chlorine	**0.13%**
Oxygen (By Difference)	**43.34%**
Non-Combustibles	**11.20%**
Total	**100.00%**

Table 8: Heating Value (As Received)

Analyte	Units	
Heating Value	Btu/lb	**5,592**

If you have any questions or comments regarding this report, or if you require any additional information, please feel free to contact me at (612) 490-9002.

Sincerely,
Estensen Environmental

David W. Estensen President

WCS Appendix A - Field Data Sheet Numerical Analysis

Service Area		Becker	OT	OT	OT	Todd	OT	Wadena	Wadena	Becker	Becker	Becker	OT	Todd	Wadena	Clay	OT	Wadena	Todd	OT	OT
Sample	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Fraction																					
Paper - Newsprint (ONP)	Lbs	3.2	0.2		3.2	3.4					1.1	0.2	1.7	0.2				1.7	0.3		
Paper - Mixed Office (SOP)	Lbs	3.4	4.9	4.2	5.3	4.2	1.9	0.8	9.8		0.8	3.1	6.2	2.5	2.5	1.9	0.1	3.5	1.0	0.3	0.7
Paper - Other (Magazines, Books, etc)	Lbs	3.4	1.1		3.6	1.0	8.6		1.2		3.4	1.9		1.3	48.1	0.9		0.8		0.1	
Paper - Compostable	Lbs	38.2	11.3	83.3	54.4	42.0	47.9	6.6	29.0	14.5	26.4	13.5	26.9	25.7	27.3	29.0	109.3	61.7	50.6	1.3	9.7
Cardboard - Corrugated (OCC)	Lbs	7.1	2.1	1.6	2.9	1.4	1.2	36.7	1.8	36.8	43.1	1.6	16.6	4.2	8.4	0.8	0.5	4.0	4.3	129.9	0.6
Cardboard - Boxboard / Paperboard	Lbs	4.9	1.5	-	3.5	1.9	3.3	0.6	2.9		4.1	8.9	22.9	12.2	0.5	2.9	0.3	2.7	0.7	0.8	1.4
Cardboard - Gable Top & Aseptic	Lbs	1.4	0.7		0.9	2.3	0.6		1.2		1.1	0.3	1.5	5.6	0.2	2.3		1.7	0.5		0.1
Cardboard - Other	Lbs	0.4	3.3	0.9	2.6	26.1	7.6	0.8	5.9		1.9	4.1	3.9	12.5	17.0	7.2	0.7	9.0	6.4	0.5	1.0
Plastic #1 - PET	Lbs	7.6	5.2	1.9	5.2	4.2	2.0	1.6	4.3		2.2	5.7	1.6	4.5	2.5	6.1	0.1	6.1	6.2	0.5	0.9
Plastic #2 - HDPE	Lbs	3.7	0.8		3.3	2.4	2.1	0.3	0.8		1.8	1.8	11.9	1.6	8.1	1.4		2.7	2.3	21.5	0.1
Plastic #3 - PVC	Lbs								0.1												
Plastic #5 - PP	Lbs	2.4		1.5	1.3	1.6	0.3	3.1	1.2		0.9	0.9	1.6	1.4	1.1	1.5	0.1	1.8	1.3	0.2	0.3
Plastic - Bags & Stretch Film	Lbs	32.8		141.3	15.6	40.4	17.2	5.2	118.7	4.5	8.4	10.6	19.4	19.6	17.8	17.2	8.9	18.7	24.6	7.7	60.4
Plastic - Other	Lbs	16.7	7.5	41.8	18.8	10.2	11.5	29.5	8.0	15.0	8.9	9.2	42.8	10.0	4.1	8.4	0.4	14.8	8.4	55.7	16.8
Organics - Yard Waste	Lbs	0.1	26.3		0.4	0.2	2.3				0.1	32.1	0.6	1.1		22.4					
Organics - Food Waste	Lbs	12.7	11.8	5.6	56.8	31.2	13.6	10.3	55.2	34.6	59.9	44.7	27.0	74.4	10.0	53.8	11.2	21.0	50.3	1.5	109.0
Organics - Other	Lbs	8.8		20.8	22.3	3.0	32.6	150.4	16.8	65.6	9.8	11.2	73.1	2.8	15.8	15.6	56.3	6.3	10.7	0.6	1.1
Textiles	Lbs	10.8	45.5	1.5	5.6	4.2	23.8		1.2		4.3	7.5	0.2	4.0	0.7	12.3	2.1	28.1	6.4	0.2	0.6
Ferrous Metal - Cans	Lbs	2.3	11.9		3.8	2.0	2.0	0.2	0.6		3.5	2.2	1.1	0.4	0.2	3.1	0.3	1.6	2.3		
Ferrous Metal - Other	Lbs	5.7	1.0		2.0	0.7			0.7		2.3	21.5	0.1	0.3	6.0	0.3		-			2.7
Non-Ferrous Metal - UBC (Cans)	Lbs	5.9	13.3	0.8	1.6	2.5	1.0	0.6	3.7		0.7	2.1	1.7	1.8	0.5	1.4		3.1	20.0	0.2	0.5
Non-Ferrous Metal - Other	Lbs	5.3		0.6	1.2	2.5	1.0		0.7		1.8	1.2	2.5	1.0	4.3	1.1		1.5	5.3	0.2	0.1
Glass	Lbs	2.5	15.6	1.4	1.3	1.5	0.5		3.3		2.4	5.0	3.2	1.2		3.7		2.1	9.3		
Inorganic Materials	Lbs	0.6	27.5	2.7	4.7	5.2	0.6		9.2		6.3	7.5	10.1	1.8	5.2	7.0			7.6		
Electronics - Regulated (Video Screens)	Lbs		0.6																		
Electronics - Non-Reg (Circuit Boards)	Lbs				1.5				7.8					2.7				0.9			
Electronics - Small Appliances	Lbs	1.1	3.8			5.4	7.6				0.7							0.2		0.6	
Household Hazardous Waste - General	Lbs	1.6					0.5														
Household Hazardous Waste - Batteries	Lbs	0.1	4.2		0.1						0.1			0.1		0.2		6.4			
Problem Wastes (Car Seats, etc.)	Lbs																				
Special Wastes (Tires, etc.)	Lbs																				
Solid Wastes Containing Mercury	Lbs		0.1																	0.4	

Sample	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Top Fines	**Lbs**	2.9	2.4		1.9	4.6	7.4	0.4	1.7		2.1	1.9	2.4	3.2	1.8	1.8		2.0	3.3		
Paper	Lbs	2.9	1.7	-	1.9	2.3	3.0	0.3	0.9	-	1.7	0.2	0.2	2.9	1.1	1.1	-	1.6	2.1	-	-
Cardboard	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plastic	Lbs	-	0.7	-	-	2.3	-	0.1	0.9	-	0.4	1.7	2.2	0.3	0.7	0.7	-	0.2	1.2	-	-
Organics	Lbs	-	-	-	-	-	3.0	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-
Ferrous Metal - Other	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Ferrous Metal - Other	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glass	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganic Material	Lbs	-	-	-	-	-	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solid Wastes Containing Mercury	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paper	%	100%	70%		100%	50%	40%	80%	50%		80%	10%	10%	90%	60%	60%		80%	65%		
Cardboard	%																				
Plastic	%		30%			50%		20%	50%		20%	90%	90%	10%	40%	40%		10%	35%		
Organics	%						40%											10%			
Ferrous Metal - Other	%																				
Non-Ferrous Metal - Other	%																				
Glass	%																				
Inorganic Material	%						20%														
Solid Wastes Containing Mercury	%																				
Total	**%**	100%	100%	0%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	0%	0%

Sample	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Bottom Fines	**Lbs**	12.0	0.9		5.3	8.7	6.8		7.0		6.0	3.4	3.0	4.8	10.9	9.4		4.5	2.7		4.0
Paper	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cardboard	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plastic	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Organics	Lbs	12.0	0.5	-	-	8.7	-	-	7.0	-	6.0	3.4	3.0	4.8	5.5	9.4	-	4.5	1.4	-	4.0
Ferrous Metal - Other	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Ferrous Metal - Other	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glass	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganic Material	Lbs	-	0.5	-	5.3	-	6.8	-	-	-	-	-	-	-	5.5	-	-	-	1.4	-	-
Solid Wastes Containing Mercury	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paper	%																				
Cardboard	%																				
Plastic	%																				

Organics	%	100%	50%			100%			100%		100%	100%	100%	100%	50%	100%		100%	50%		100%
Ferrous Metal - Other	%																				
Non-Ferrous Metal - Other	%																				
Glass	%																				
Inorganic Material	%		50%		100%		100%								50%				50%		
Solid Wastes Containing Mercury	%																				
Total	**%**	100%	100%	0%	100%	100%	100%	0%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	0%	100%

Sample	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Non-Separable #1	**Lbs**	7.0			5.2	7.2	12.8				9.3	6.4					25.5	0.3			
Paper	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cardboard	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plastic	Lbs	2.8	-	-	0.3	0.7	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	-
Organics	Lbs	-	-	-	4.2	4.3	0.6	-	-	-	-	5.8	-	-	-	-	12.8	0.0	-	-	-
Ferrous Metal - Other	Lbs	4.2	-	-	0.8	2.2	-	-	-	-	-	-	-	-	-	-	12.8	0.3	-	-	-
Non-Ferrous Metal - Other	Lbs	-	-	-	-	-	12.2	-	-	-	3.7	-	-	-	-	-	-	-	-	-	-
Glass	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganic Material	Lbs	-	-	-	-	-	-	-	-	-	5.6	-	-	-	-	-	-	-	-	-	-
Solid Wastes Containing Mercury	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paper	%																				
Cardboard	%																				
Plastic	%	40%			5%	10%						10%									
Organics	%				80%	60%	5%					90%					50%	10%			
Ferrous Metal - Other	%	60%			15%	30%											50%	90%			
Non-Ferrous Metal - Other	%						95%				40%										
Glass	%																				
Inorganic Material	%										60%										
Solid Wastes Containing Mercury	%																				
Total	**%**	100%	0%	0%	100%	100%	100%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%	0%	0%

Service Area		**OT**	**OT**	**Todd**	**OT**	**Becker**	**Clay**	**Clay**	**OT**	**OT**	**Todd**	**OT**	**OT**	**Becker**	**Becker**	**Clay**	**Clay**	**Clay**	**Becker**	**OT**	**OT**
Sample	**Units**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Fraction																					
Paper - Newsprint (ONP)	Lbs	0.3	2.2	0.3			0.1			0.3	0.7				0.1	0.2	0.8			0.5	0.3
Paper - Mixed Office (SOP)	Lbs	11.9	3.3	7.0		0.2	1.9	3.4		3.2	1.5	3.4	0.4	0.9	1.3	3.5	7.8	3.6	2.2	1.1	0.9
Paper - Other (Magazines, Books, etc)	Lbs	4.3	3.5	3.7		1.0	0.3	1.6		3.3		0.1		0.2	0.4	8.7	0.9	1.4	0.8	7.3	0.3
Paper - Compostable	Lbs	22.1	22.7	23.5	36.0	39.6	29.0	30.6	1.2	87.8	21.9	51.6	25.4	25.0	38.6	23.7	26.5	32.7	17.0	33.6	45.8
Cardboard - Corrugated (OCC)	Lbs	1.1	5.7	26.5	1.0	1.3	0.5	0.7	1.9	1.7	1.8	2.6	65.5	1.9	13.7	0.4	0.4	5.0	2.5	21.1	1.8
Cardboard - Boxboard / Paperboard	Lbs	4.3	4.8	3.3	1.4	1.2	4.2	4.3	10.4	2.9	0.6	6.8	0.7	2.4	1.3	1.6	3.6	3.9	3.3	1.2	2.0
Cardboard - Gable Top & Aseptic	Lbs	0.7	0.9	0.6	0.3	0.9	1.2	1.0		0.5	0.5	0.3	0.8	0.3	0.1	0.6	1.8	0.8	0.4	0.3	0.8
Cardboard - Other	Lbs	12.1	3.7	5.2	4.4	10.0	1.7	6.4	0.5	7.0	4.1	4.6		5.2	2.1	6.9	4.1	5.6	1.4	3.8	18.9
Plastic #1 - PET	Lbs	5.1	4.2	3.1	3.9	2.7	2.9	2.8	0.8	3.0	2.7	4.7	5.7	3.7	3.2	2.3	3.6	5.0	5.1	4.2	5.1
Plastic #2 - HDPE	Lbs	4.8	1.7	5.8	1.6	1.7	0.5	1.2		0.8	1.6	1.2	6.3	1.4	0.8	1.6	1.2	3.8	1.6	10.6	1.8
Plastic #3 - PVC	Lbs	16.7							0.3		0.1							1.1	1.1		
Plastic #5 - PP	Lbs	1.6	1.7	1.8	1.0	1.2	1.3	1.6		1.7	0.9	0.9	3.0	1.8	1.3	2.1	1.3	1.7	2.5	0.6	3.4
Plastic - Bags & Stretch Film	Lbs	11.1	20.2	20.5	16.1	23.2	16.1	16.9	12.3	22.8	18.2	25.4	12.3	16.9	13.8	15.3	15.1	19.2	25.2	15.4	23.1
Plastic - Other	Lbs	30.2	24.5	17.2	11.1	34.3	13.2	21.1	79.4	11.5	12.1	17.5	27.8	6.4	14.3	13.5	16.7	16.7	9.6	11.4	13.6
Organics - Yard Waste	Lbs	5.2	14.4		4.7	6.6	29.1	4.2		15.6	0.5			3.1	15.2	11.7	2.3	14.8	504.9	1.4	6.6
Organics - Food Waste	Lbs	37.0	12.5	23.0	32.7	17.1	39.4	49.0	96.8	21.7	8.7	9.9	56.4	78.2	24.8	34.2	51.5	39.3	25.4	31.7	49.9
Organics - Other	Lbs	13.2	16.3	35.9	19.4	9.0	20.0	16.6		5.8	10.5	7.9	2.1	19.7	13.7	16.0	19.2	10.0	48.8	43.8	13.0
Textiles	Lbs	1.8	12.3	11.6	3.1	11.7	25.7	9.7	28.8	5.1	17.3	27.5	0.1	4.5	18.6	15.4	17.0	20.1	13.0	26.0	3.8
Ferrous Metal - Cans	Lbs	3.6	8.2	2.6	1.0	1.0	5.6	7.0	0.5	3.0	0.8	0.3	1.0	0.8	1.1	8.6	1.1	2.7	1.8	5.1	2.1
Ferrous Metal - Other	Lbs	1.4	2.4	0.2	2.2	1.5	0.9	0.9	2.8	0.5	2.0	0.7			1.2	1.8	7.4	1.0	1.4		8.3
Non-Ferrous Metal - UBC (Cans)	Lbs	3.4	1.8	1.5	4.9	2.4	1.4	1.1	1.0	2.3	3.4	1.5	0.5	2.3	1.2	1.7	3.2	1.7	3.8	2.0	5.7
Non-Ferrous Metal - Other	Lbs	1.2	40.6			2.2	5.2	0.8	0.5	2.4	0.7	0.5		0.7	2.0	0.8	2.7	0.9	0.4	0.4	2.2
Glass	Lbs	1.0	3.9	4.6	2.4	4.3	5.4	3.1		1.1	2.7	0.6	1.5	5.9	11.9	5.6	8.2	2.9	3.8	7.1	3.1
Inorganic Materials	Lbs		6.0	5.0	36.4	3.9		13.7		8.2	1.0	12.6	1.1	19.0	0.8	21.7	6.2	19.0	20.8	0.5	2.7
Electronics - Regulated (Video Screens)	Lbs																0.1				
Electronics - Non-Reg (Circuit Boards)	Lbs	0.2	0.1					0.1		3.1	0.5	3.1			0.1						
Electronics - Small Appliances	Lbs	2.4	0.9		0.4		0.7	0.2		4.1		15.4			3.2	0.2		3.3			
Household Hazardous Waste - General	Lbs		1.4																		
Household Hazardous Waste - Batteries	Lbs	6.1	0.2	5.8	5.4		5.7	6.4	1.9		0.1				0.1	0.2	0.5				0.1
Problem Wastes (Car Seats, etc.)	Lbs																				
Special Wastes (Tires, etc.)	Lbs	2.3																			
Solid Wastes Containing Mercury	Lbs									0.4		1.7			0.7	0.1		3.0			0.1

Sample	**Units**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Top Fines	**Lbs**	2.0	3.0	4.9	3.6	21.9	13.9	4.4		2.3	52.9	2.8	1.1	2.5	1.9	4.2	4.4	2.6	3.0	2.5	4.6
Paper	Lbs	1.4	2.7	2.5	2.9	17.5	12.5	2.6	-	1.8	26.5	1.7	1.1	2.0	1.8	3.4	3.5	2.3	1.8	1.5	3.2
Cardboard	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plastic	Lbs	0.6	0.3	2.5	0.7	4.4	1.4	1.8	-	0.5	15.9	1.1	0.0	0.5	-	0.8	0.9	0.3	1.2	1.0	1.4
Organics	Lbs	-	-	-	-	-	-	-	-	-	10.6	-	-	-	-	-	-	-	-	-	-
Ferrous Metal - Other	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Ferrous Metal - Other	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glass	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganic Material	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-
Solid Wastes Containing Mercury	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paper	%	70%	90%	50%	80%	80%	90%	60%		80%	50%	60%	98%	80%	95%	80%	80%	90%	60%	60%	70%
Cardboard	%																				
Plastic	%	30%	10%	50%	20%	20%	10%	40%		20%	30%	40%	2%	20%		20%	20%	10%	40%	40%	30%
Organics	%										20%										

Ferrous Metal - Other	%																				
Non-Ferrous Metal - Other	%																				
Glass	%																				
Inorganic Material	%														5%						
Solid Wastes Containing Mercury	%																				
Total	**%**	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Sample	**Units**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Bottom Fines	**Lbs**	3.0	9.1	5.6	6.0	9.8	4.8	6.3	0.6	4.9	9.8	3.8	4.5	6.4	5.6	6.1	7.4	5.1	5.7	4.4	8.0
Paper	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cardboard	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plastic	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Organics	Lbs	3.0	-	-	4.8	-	1.9	1.9	-	2.5	4.9	0.4	4.5	6.4	5.6	6.1	6.7	5.1	-	4.4	8.0
Ferrous Metal - Other	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Ferrous Metal - Other	Lbs	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-
Glass	Lbs	-	-	-	-	-	-	-	-	2.5	-	-	-	-	-	-	-	-	-	-	-
Inorganic Material	Lbs	-	9.1	5.6	1.2	9.8	2.9	4.4	-	-	4.9	3.4	-	-	-	-	0.7	-	5.7	-	-
Solid Wastes Containing Mercury	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paper	%																				
Cardboard	%																				
Plastic	%																				
Organics	%	100%			80%		40%	30%		50%	50%	10%	100%	100%	100%	100%	90%	100%		100%	100%
Ferrous Metal - Other	%																				
Non-Ferrous Metal - Other	%								100%												
Glass	%									50%											
Inorganic Material	%		100%	100%	20%	100%	60%	70%			50%	90%					10%		100%		
Solid Wastes Containing Mercury	%																				
Total	**%**	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Sample	**Units**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Non-Separable #1	**Lbs**	9.7			14.3	8.3						29.2			4.6						
Paper	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cardboard	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plastic	Lbs	-	-	-	12.9	7.5	-	-	-	-	-	8.8	-	-	4.4	-	-	-	-	-	-
Organics	Lbs	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ferrous Metal - Other	Lbs	0.5	-	-	1.4	-	-	-	-	-	-	20.4	-	-	-	-	-	-	-	-	-
Non-Ferrous Metal - Other	Lbs	-	-	-	-	0.8	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-
Glass	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganic Material	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solid Wastes Containing Mercury	Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paper	%																				
Cardboard	%																				
Plastic	%				90%	90%						30%			95%						
Organics	%	95%																			
Ferrous Metal - Other	%	5%			10%							70%									
Non-Ferrous Metal - Other	%					10%									5%						
Glass	%																				
Inorganic Material	%																				
Solid Wastes Containing Mercury	%																				
Total	**%**	100%	0%	0%	100%	100%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%

Service Area									
Sample	**Units**	**Item Subtotal**	**Wt % of Total**						
Fraction							**Wt % Primary Fraction**		
Paper - Newsprint (ONP)	Lbs	**21.0**	**0.2%**	Combustibles			1.3%		
Paper - Mixed Office (SOP)	Lbs	**114.6**	**1.2%**				7.2%		
Paper - Other (Magazines, Books, etc)	Lbs	**113.2**	**1.2%**				7.1%		
Paper - Compostable	Lbs	**1,342.9**	**14.3%**		Paper	1,591.7	84.4%	100%	
Cardboard - Corrugated (OCC)	Lbs	**462.7**	**4.9%**				54.1%		
Cardboard - Boxboard / Paperboard	Lbs	**140.2**	**1.5%**				16.4%		
Cardboard - Gable Top & Aseptic	Lbs	**33.2**	**0.4%**				3.9%		
Cardboard - Other	Lbs	**219.5**	**2.3%**		Cardboard	855.6	25.7%	100%	
Plastic #1 - PET	Lbs	**142.2**	**1.5%**				7.0%		
Plastic #2 - HDPE	Lbs	**116.6**	**1.2%**				5.8%		
Plastic #3 - PVC	Lbs	**19.4**	**0.2%**				1.0%		
Plastic #5 - PP	Lbs	**53.9**	**0.6%**				2.7%		
Plastic - Bags & Stretch Film	Lbs	**948.1**	**10.1%**				46.9%		
Plastic - Other	Lbs	**740.6**	**7.9%**		Plastic	2,020.8	36.6%	100%	
Organics - Yard Waste	Lbs	**725.9**	**7.8%**				24.0%		
Organics - Food Waste	Lbs	**1,433.8**	**15.3%**				47.4%		
Organics - Other	Lbs	**864.5**	**9.2%**		Organics	3,024.2	28.6%	100%	
Textiles	Lbs	**432.1**	**4.6%**		Textiles	432.1	100.0%	100%	
Ferrous Metal - Cans	Lbs	**95.4**	**1.0%**	Non-Combustibles					
Ferrous Metal - Other	Lbs	**79.9**	**0.9%**						
Non-Ferrous Metal - UBC (Cans)	Lbs	**108.2**	**1.2%**						
Non-Ferrous Metal - Other	Lbs	**94.5**	**1.0%**						
Glass	Lbs	**132.1**	**1.4%**						
Inorganic Materials	Lbs	**274.6**	**2.9%**						
Electronics - Regulated (Video Screens)	Lbs	**0.7**	**0.0%**						
Electronics - Non-Reg (Circuit Boards)	Lbs	**20.1**	**0.2%**						
Electronics - Small Appliances	Lbs	**50.2**	**0.5%**						

Household Hazardous Waste - General	Lbs	**3.5**	**0.0%**			
Household Hazardous Waste - Batteries	Lbs	**43.7**	**0.5%**			
Problem Wastes (Car Seats, etc.)	Lbs	**-**	**0.0%**			
Special Wastes (Tires, etc.)	Lbs	**2.3**	**0.0%**			
Solid Wastes Containing Mercury	Lbs	**6.5**	**0.1%**		Various	911.7

Sample	**Units**	**Item Subtotal**	**Wt % of Total**			
Top Fines	**Lbs**	**178.3**	**1.9%**			
Paper	Lbs	116.5	1.2%	Combustibles	Paper	116.5
Cardboard	Lbs	-	0.0%		Cardboard	-
Plastic	Lbs	46.5	0.5%		Plastic	46.5
Organics	Lbs	13.7	0.1%		Organics	13.7
Ferrous Metal - Other	Lbs	-	0.0%	Non-Combustibles		
Non-Ferrous Metal - Other	Lbs	-	0.0%			
Glass	Lbs	-	0.0%			
Inorganic Material	Lbs	1.6	0.0%			
Solid Wastes Containing Mercury	Lbs	-	0.0%		Various	1.6
Paper	%					
Cardboard	%					
Plastic	%					
Organics	%					
Ferrous Metal - Other	%					
Non-Ferrous Metal - Other	%					
Glass	%					
Inorganic Material	%					
Solid Wastes Containing Mercury	%					
Total	**%**					

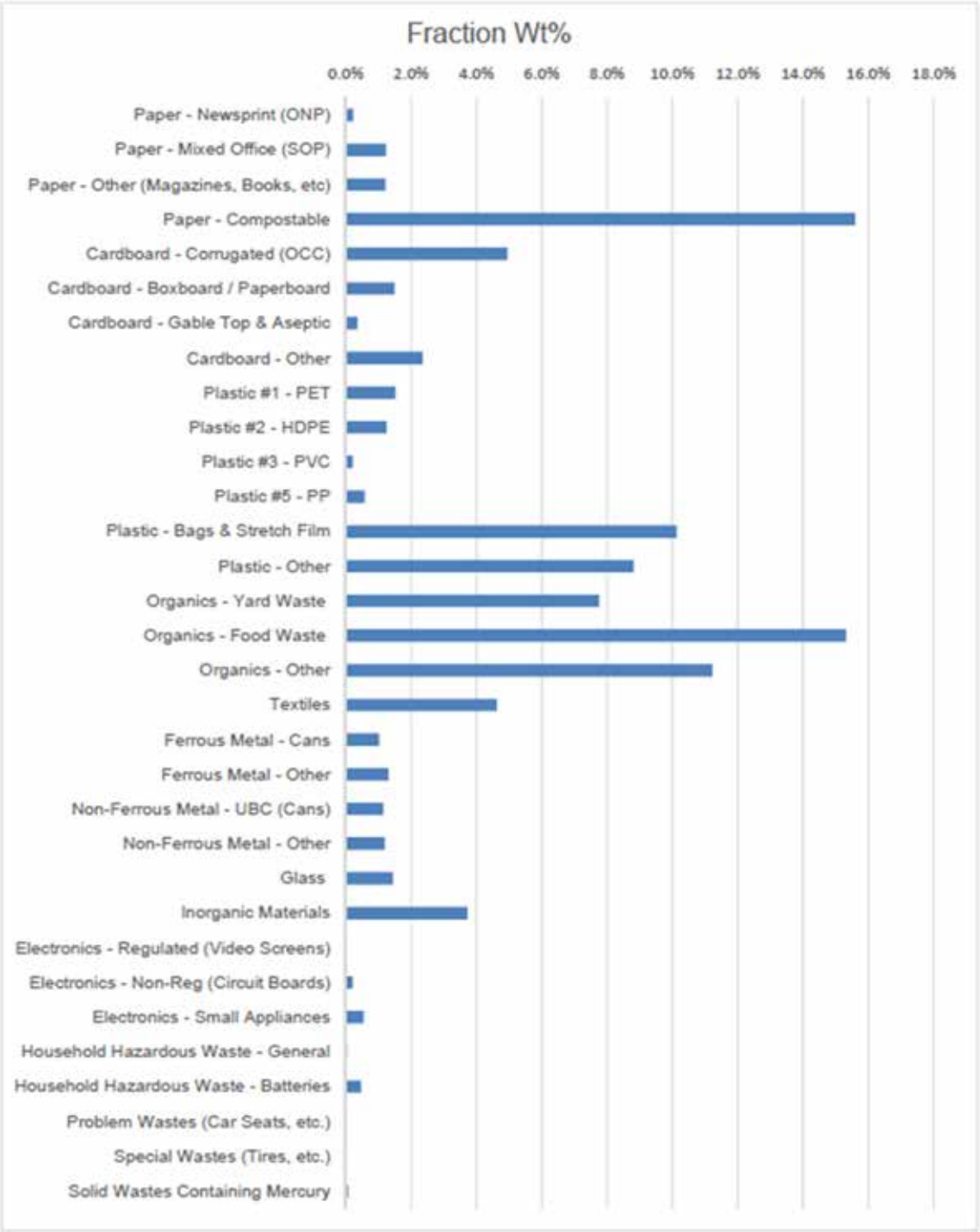
Fraction	**Samples**	**Top Fines**	**Bottom Fines**	**Non-Separables**	**Total**	**Wt% Total**
Paper - Newsprint (ONP)	21.0				21.0	0.2%
Paper - Mixed Office (SOP)	114.6				114.6	1.2%
Paper - Other (Magazines, Books, etc)	113.2				113.2	1.2%
Paper - Compostable	1,342.9	116.5	-	-	1,459.4	15.6%
Cardboard - Corrugated (OCC)	462.7				462.7	4.9%
Cardboard - Boxboard / Paperboard	140.2				140.2	1.5%
Cardboard - Gable Top & Aseptic	33.2				33.2	0.4%
Cardboard - Other	219.5	-	-	-	219.5	2.3%
Plastic #1 - PET	142.2				142.2	1.5%
Plastic #2 - HDPE	116.6				116.6	1.2%
Plastic #3 - PVC	19.4				19.4	0.2%
Plastic #5 - PP	53.9				53.9	0.6%
Plastic - Bags & Stretch Film	948.1				948.1	10.1%
Plastic - Other	740.6	46.5	-	37.9	825.0	8.8%
Organics - Yard Waste	725.9				725.9	7.8%
Organics - Food Waste	1,433.8				1,433.8	15.3%
Organics - Other	864.5	13.7	136.2	36.9	1,051.3	11.2%
Textiles	432.1				432.1	4.6%
Ferrous Metal - Cans	95.4				95.4	1.0%
Ferrous Metal - Other	79.9	-	-	42.5	122.4	1.3%
Non-Ferrous Metal - UBC (Cans)	108.2				108.2	1.2%
Non-Ferrous Metal - Other	94.5	-	0.6	16.9	112.0	1.2%
Glass	132.1	-	2.5	-	134.6	1.4%
Inorganic Materials	274.6	1.6	67.1	5.6	348.9	3.7%
Electronics - Regulated (Video Screens)	0.7				0.7	0.0%
Electronics - Non-Reg (Circuit Boards)	20.1				20.1	0.2%
Electronics - Small Appliances	50.2				50.2	0.5%
Household Hazardous Waste - General	3.5				3.5	0.0%
Household Hazardous Waste - Batteries	43.7				43.7	0.5%
Problem Wastes (Car Seats, etc.)	-				-	0.0%
Special Wastes (Tires, etc.)	2.3				2.3	0.0%
Solid Wastes Containing Mercury	6.5	-	-	-	6.5	0.1%
Total	**8,836.1**	**178.3**	**206.3**	**139.8**	**9,360.5**	**100.0%**

Total Combustibles		Wt % Total	Wt % Combustibles
Item	Lbs		
Paper	1,709.2	18.2%	20.6%
Cardboard	855.6	9.1%	10.3%
Plastic	2,105.2	22.5%	25.3%
Organics	3,211.0	34.3%	38.6%
Textiles	432.1	4.6%	5.2%
Total Combustibles	**8312.0**	**88.8%**	**100.0%**

Total Non-Combustibles		Wt % Total
Various	1,048.5	11.2%
		100.0%

Sample	Units	Item Subtotal	Wt % of Total			
Bottom Fines	**Lbs**	**206.3**	**2.2%**			
Paper	Lbs	-	0.0%	Combustibles	Paper	-
Cardboard	Lbs	-	0.0%		Cardboard	-
Plastic	Lbs	-	0.0%		Plastic	-
Organics	Lbs	136.2	1.5%		Organics	136.2
Ferrous Metal - Other	Lbs	-	0.0%	Non-Combustibles		
Non-Ferrous Metal - Other	Lbs	0.6	0.0%			
Glass	Lbs	2.5	0.0%			
Inorganic Material	Lbs	67.1	0.7%			
Solid Wastes Containing Mercury	Lbs	-	0.0%		Various	70.2
Paper	%					
Cardboard	%					
Plastic	%					
Organics	%					
Ferrous Metal - Other	%					
Non-Ferrous Metal - Other	%					
Glass	%					
Inorganic Material	%					
Solid Wastes Containing Mercury	%					
Total	**%**					

Sample	Units	Item Subtotal	Wt % of Total			
Non-Separable #1	**Lbs**	**139.8**	**1.5%**			
Paper	Lbs	-	0.0%	Combustibles	Paper	-
Cardboard	Lbs	-	0.0%		Cardboard	-
Plastic	Lbs	37.9	0.4%		Plastic	37.9
Organics	Lbs	36.9	0.4%		Organics	36.9
Ferrous Metal - Other	Lbs	42.5	0.5%	Non-Combustibles		
Non-Ferrous Metal - Other	Lbs	16.9	0.2%			
Glass	Lbs	-	0.0%			
Inorganic Material	Lbs	5.6	0.1%			
Solid Wastes Containing Mercury	Lbs	-	0.0%		Various	65.0
Paper	%					
Cardboard	%					
Plastic	%					
Organics	%					
Ferrous Metal - Other	%					
Non-Ferrous Metal - Other	%					
Glass	%					
Inorganic Material	%					
Solid Wastes Containing Mercury	%					
Total	**%**		**100.0%**		**Total Lbs.**	**9,360.5**


Fraction Wt%
0.0%
2.0%
4.0%
6.0%
8.0%
10.0%
12.0%
14.0%
16.0%
18.0%
Paper - Newsprint (ONP)
Paper - Mixed Office (SOP)
Paper - Other (Magazines, Books, etc)
Paper - Compostable
Cardboard - Corrugated (OCC)
Cardboard - Boxboard / Paperboard
Cardboard - Gable Top & Aseptic
Cardboard - Other
Plastic #1 - PET
Plastic #2 - HDPE
Plastic #3 - PVC
Plastic #5 - PP
Plastic - Bags & Stretch Film
Plastic - Other
Organics - Yard Waste
Organics - Food Waste
Organics - Other
Textiles
Ferrous Metal - Cans
Ferrous Metal - Other
Non-Ferrous Metal - UBC (Cans)
Non-Ferrous Metal - Other
Glass
Inorganic Materials
Electronics - Regulated (Video Screens)
Electronics - Non-Reg (Circuit Boards)
Electronics - Small Appliances
Household Hazardous Waste - General
Household Hazardous Waste - Batteries
Problem Wastes (Car Seats, etc.)
Special Wastes (Tires, etc.)
Solid Wastes Containing Mercury

WCS Appendix B MVTL Analytical Results

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Member ACIL

Workorder: 2023 SWCS (22564) **Client:** Perham Resource Recovery
Account #: 16148

Brian Schmidt
Perham Resource Recovery Facility
201 6th Ave NE
Perham, MN 56573

Certificate of Analysis

Approval

All data reported has been reviewed and approved by:

Stacy Zander

Stacy Zander, Bismarck Assistant Lab Manager Bismarck, ND

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

Report Date: Thursday, August 17, 2023 9:54:13 AM

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Member ACIL

Workorder: 2023 SWCS (22564) **Client:** Perham Resource Recovery

Analytical Results

Lab ID:	22564001	**Date Collected:**	08/01/2023 12:00	**Matrix:**	RD
Sample ID:	Sample #1	**Date Received:**	08/02/2023 09:08	**Collector:**	Client

* PROXIMATE *					* ULTIMATE *				
ANALYTE	AS RECEIVED		DRY BASIS		ANALYTE	AS RECEIVED		DRY BASIS	
Total Moisture	29.46	wt. %			Total Moisture	29.46	wt. %		
Air Dry Moisture	26.16	wt. %			Air Dry Moisture	26.16	wt. %		
Oven Dry Moisture	4.48	wt. %			Oven Dry Moisture	4.48	wt. %		
Ash	5.68	wt. %	8.05	wt. %	Ash	5.68	wt. %	8.05	wt. %
Volatile Matter	61.88	wt. %	87.73	wt. %	Carbon	36.66	wt. %	51.98	wt. %
Fixed Carbon	2.98	wt. %	4.22	wt. %	Hydrogen	8.34	wt. %	7.16	wt. %
BTU/lb	6050	BTU/lb	8577	BTU/lb	Nitrogen	0.61	wt. %	0.86	wt. %
Total Sulfur	0.06	wt. %	0.08	wt. %	Total Sulfur	0.06	wt. %	0.08	wt. %
					Oxygen by Difference	46.65	wt. %	31.87	wt. %
					Chlorine	1640	ug/g	2320	ug/g

* SULFUR FORMS *					* ASH FUSION *		
ANALYTE	AS RECEIVED		DRY BASIS		ANALYTE	REDUCING	OXIDIZING
Total Sulfur	0.06	wt. %	0.08	wt. %			

* MINERAL ANALYSIS OF ASH *		* MISCELLANEOUS *			
ANALYTE	DRY BASIS	ANALYTE	AS RECEIVED		DRY BASIS
		Hydrogen Less Water	5.05	wt. %	
		Oxygen Less Water	22.48	wt. %	

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-382-0855 ~ Fax 515-382-3885
www.MVTL.com

Member ACIL

Workorder: 2023 SWCS (22564) **Client:** Perham Resource Recovery

Analytical Results

Lab ID:	22564002	**Date Collected:**	08/01/2023 12:00	**Matrix:**	RD
Sample ID:	Sample #2	**Date Received:**	08/02/2023 09:08	**Collector:**	Client

*** PROXIMATE ***

ANALYTE	AS RECEIVED		DRY BASIS	
Total Moisture	29.63	wt. %		
Air Dry Moisture	26.16	wt. %		
Oven Dry Moisture	4.70	wt. %		
Ash	4.87	wt. %	6.92	wt. %
Volatile Matter	61.53	wt. %	87.44	wt. %
Fixed Carbon	3.97	wt. %	5.64	wt. %
BTU/lb	6273	BTU/lb	8914	BTU/lb
Total Sulfur	0.06	wt. %	0.08	wt. %

ULTIMATE

ANALYTE	AS RECEIVED		DRY BASIS	
Total Moisture	29.63	wt. %		
Air Dry Moisture	26.16	wt. %		
Oven Dry Moisture	4.70	wt. %		
Ash	4.87	wt. %	6.92	wt. %
Carbon	37.07	wt. %	52.68	wt. %
Hydrogen	5.44	wt. %	7.28	wt. %
Nitrogen	0.53	wt. %	0.75	wt. %
Total Sulfur	0.06	wt. %	0.08	wt. %
Oxygen by Difference	49.04	wt. %	32.29	wt. %
Chlorine	1530	ug/g	2170	ug/g

*** SULFUR FORMS ***

ANALYTE	AS RECEIVED		DRY BASIS	
Total Sulfur	0.06	wt. %	0.08	wt. %

*** ASH FUSION ***

ANALYTE	REDUCING	OXIDIZING

*** MINERAL ANALYSIS OF ASH ***

ANALYTE	DRY BASIS

*** MISCELLANEOUS ***

ANALYTE	AS RECEIVED		DRY BASIS
Hydrogen Less Water	5.13	wt. %	
Oxygen Less Water	22.72	wt. %	

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Report Date: Thursday, August 17, 2023 9:54:13 AM

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Member ACIL

Workorder: 2023 SWCS (22564) **Client:** Perham Resource Recovery

Analytical Results

Lab ID: 22564003 **Date Collected:** 08/01/2023 12:00 **Matrix:** RD
Sample ID: Sample #3 **Date Received:** 08/02/2023 09:08 **Collector:** Client

* PROXIMATE *				
ANALYTE	AS RECEIVED		DRY BASIS	
Total Moisture	29.60	wt. %		
Air Dry Moisture	26.16	wt. %		
Oven Dry Moisture	4.67	wt. %		
Ash	3.68	wt. %	5.23	wt. %
Volatile Matter	62.29	wt. %	88.49	wt. %
Fixed Carbon	4.42	wt. %	6.28	wt. %
BTU/lb	6043	BTU/lb	8585	BTU/lb
Total Sulfur	0.05	wt. %	0.07	wt. %

ULTIMATE				
ANALYTE	AS RECEIVED		DRY BASIS	
Total Moisture	29.60	wt. %		
Air Dry Moisture	26.16	wt. %		
Oven Dry Moisture	4.67	wt. %		
Ash	3.68	wt. %	5.23	wt. %
Carbon	37.16	wt. %	52.79	wt. %
Hydrogen	8.36	wt. %	7.18	wt. %
Nitrogen	0.63	wt. %	0.90	wt. %
Total Sulfur	0.05	wt. %	0.07	wt. %
Oxygen by Difference	50.11	wt. %	33.83	wt. %
Chlorine	1430	ug/g	2040	ug/g

* SULFUR FORMS *				
ANALYTE	AS RECEIVED		DRY BASIS	
Total Sulfur	0.05	wt. %	0.07	wt. %

* ASH FUSION *		
ANALYTE	REDUCING	OXIDIZING

* MINERAL ANALYSIS OF ASH *	
ANALYTE	DRY BASIS

* MISCELLANEOUS *			
ANALYTE	AS RECEIVED		DRY BASIS
Hydrogen Less Water	5.05	wt. %	
Oxygen Less Water	23.81	wt. %	

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Member ACIL

Workorder: 2023 SWCS (22564) **Client:** Perham Resource Recovery

Analytical Results

Lab ID: 22564004 **Date Collected:** 08/01/2023 12:00 **Matrix:** RD
Sample ID: Sample #4 **Date Received:** 08/02/2023 09:08 **Collector:** Client

* PROXIMATE *					*ULTIMATE*				
ANALYTE	AS RECEIVED		DRY BASIS		ANALYTE	AS RECEIVED		DRY BASIS	
Total Moisture	29.60	wt. %			Total Moisture	29.60	wt. %		
Air Dry Moisture	26.16	wt. %			Air Dry Moisture	26.16	wt. %		
Oven Dry Moisture	4.67	wt. %			Oven Dry Moisture	4.67	wt. %		
Ash	4.16	wt. %	5.91	wt. %	Ash	4.16	wt. %	5.91	wt. %
Volatile Matter	62.63	wt. %	88.97	wt. %	Carbon	38.56	wt. %	54.78	wt. %
Fixed Carbon	3.61	wt. %	5.12	wt. %	Hydrogen	8.62	wt. %	7.54	wt. %
BTU/lb	6825	BTU/lb	9696	BTU/lb	Nitrogen	0.58	wt. %	0.82	wt. %
Total Sulfur	0.07	wt. %	0.09	wt. %	Total Sulfur	0.07	wt. %	0.09	wt. %
					Oxygen by Difference	48.02	wt. %	30.86	wt. %
					Chlorine	1210	ug/g	1720	ug/g

* SULFUR FORMS *					* ASH FUSION *		
ANALYTE	AS RECEIVED		DRY BASIS		ANALYTE	REDUCING	OXIDIZING
Total Sulfur	0.07	wt. %	0.09	wt. %			

* MINERAL ANALYSIS OF ASH *		* MISCELLANEOUS *		
ANALYTE	DRY BASIS	ANALYTE	AS RECEIVED	DRY BASIS
		Hydrogen Less Water	5.31 wt. %	
		Oxygen Less Water	21.72 wt. %	

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Workorder: 2023 SWCS (22564) **Client:** Perham Resource Recovery

Perham Resource Recoven
WO: 22564
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. Order

Minnesota Valley Testing Laboratories, Inc.
2616 East Broadway Avenue
Bismarck, ND 58501
Phone: (701) 258-9720
Toll Free: (800) 279-6885 Fax: (701) 258-9724

Company Name and Address: Perham Resource Recovery Facility, 201 6th Avenue NE, Perham, MN 56573	**Account #:**	16148	Er
	Phone #:	(218) 346-4404	
	Contact (Report to):	Brian Schmidt	
	Name of Samplers:	Brian Schmidt	
Billing Address (indicate if different from above):	**Quote Number**	JD053123-01	Da
	Project Name/Number:	2023 SWCS	

Transferred by:	Date:	Time:	Sample Condition:	Received by:
1. Brian Schmidt	7/30/23	1500		
2.				

Comments:

Sample Information

Lab Use Only Lab Number	Sample ID	Sample Type	Date Sampled	Time Sampled	Anal
	Paper	Solid Waste	8/1/2023	12:00 p.m.	Proximate, Ultimate, Chlorine
	Cardboard	Solid Waste	8/1/2023	12:00 p.m.	Proximate, Ultimate, Chlorine
	Plastic	Solid Waste	8/1/2023	12:00 p.m.	Proximate, Ultimate, Chlorine
	Organic	Solid Waste	8/1/2023	12:00 p.m.	Proximate, Ultimate, Chlorine
	Textile	Solid Waste	8/1/2023	12:00 p.m.	Proximate, Ultimate, Chlorine

Enclosed are your containers for your sampling event. Completely fill and label containers appropriately for the analyses to be conducted. Complete chain of custody regarding individual parameter holding times, chemical and thermal preservation and sample volumes please refer to our sample preservation guide on our website at service at 1-800-782-3557. If samples show signs of contamination, inadequate preservation or are in any way compromised you will be contacted as to whether to p sample.

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Workorder: 2023 SWCS (22564) **Client:** Perham Resource Recovery

Minnesota Valley Testing Laboratories, Inc.
2616 East Broadway Avenue
Bismarck, ND 58501
Phone: (701) 258-9720
Toll Free: (800) 279-6885 Fax: (701) 258-9724

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Page

Form # 10-90006-0

Work Order

Company Name and Address: Perham Resource Recovery Facility, 201 6th Avenue NE, Perham, MN 56573			Account #:	16148	E
			Phone #:	(218) 346-4404	
			Contact (Report to):	Brian Schmidt	
			Name of Samplers:	Brian Schmidt	
Billing Address (indicate if different from above):			Quote Number	JD953123-61	Da
			Project Name/Number:	2023 SWCS	
Transferred by:	Date:	Time:	Sample Condition:	Received by:	
1. Brian Schmidt	7/21/23	1500			
2.					

Comments:

Sample Information

Lab Use Only Lab Number	Sample ID	Sample Type	Date Sampled	Time Sampled	Anal

Please submit the top two copies with your samples. We will return the completed original with your

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Report Date: Thursday, August 17, 2023 9:54:13 AM

WCS Appendix C Proximate Analysis, Ultimate Analysis, and Heating Value Calculations

Perham Resource Recovery Facility
2023 Solid Waste Composition Study Results

Total Combustibles

Item	Lbs	wt%
Paper	1,708.2	18.2%
Cardboard	855.6	9.1%
Plastic	2,105.2	22.5%
Organics	3,211.0	34.3%
Textiles	432.1	4.6%
Total	**8,312.0**	**88.8%**

Total Non-Combustibles

Item	Lbs	wt%
Total	**1,048.5**	**11.2%**

Total	**9,360.5**	**100.0%**

Proximate Analysis (Combustible Fractions Only - As Received Basis)

Analyte	Units	Sample 1	Sample 2	Sample 3	Sample 4	Average
Total Moisture	wt%	29.46%	29.63%	29.60%	29.60%	29.57%
Ash	wt%	5.68%	4.87%	3.68%	4.16%	4.60%
Volatile Matter	wt%	61.85%	61.53%	62.29%	62.63%	62.08%
Fixed Carbon (By Difference)	wt%	2.98%	3.97%	4.43%	3.61%	3.75%
Total		100.00%	100.00%	100.00%	100.00%	100.00%
Heating Value	Btu/lb.	6,050	6,273	6,043	6,825	6,298

Proximate Analysis (Including Non-Combustibles)

Analyte	Result as Received (Including Non-Combustibles)
Total Moisture	26.26%
Ash	4.08%
Volatile Matter	55.13%
Fixed Carbon (By Difference)	3.33%
Non-Combustibles	11.20%
Total	100.00%
Heating Value	5,592

Ultimate Analysis (Combustible Fractions Only - As Received Basis)

Analyte	Units	Sample 1	Sample 2	Sample 3	Sample 4	Average
Ash[1]	wt%	5.68%	4.87%	3.68%	4.16%	4.60%
Carbon	wt%	36.66%	37.07%	37.16%	38.56%	37.36%
Hydrogen	wt%	8.34%	8.44%	8.36%	8.62%	8.44%
Nitrogen	wt%	0.61%	0.53%	0.63%	0.58%	0.59%
Total Sulfur	wt%	0.06%	0.06%	0.05%	0.07%	0.06%
Chlorine	wt%	0.16%	0.15%	0.14%	0.12%	0.15%
Oxygen (By Difference)[2]	wt%	48.49%	48.88%	49.98%	47.89%	48.81%
Total		100.00%	100.00%	100.00%	100.00%	100.00%

Ultimate Analysis (Including Non-Combustibles)

Analyte	Result as Received (Including Non-Combustibles)
Ash[1]	4.08%
Carbon	33.18%
Hydrogen	7.49%
Nitrogen	0.52%
Total Sulfur	0.05%
Chlorine	0.13%
Oxygen (By Difference)	43.34%
Non-Combustibles	11.20%
Total	100.00%

[1] Ash has been included in Ultimate Analysis
[2] Oxygen (By Difference) is slightly lower than reported in MVTL analytical due to inclusion of Chlorine

WCS Appendix D Field Data Sheets

VERNAM Mn.
July 24th 2023

Load Information Form - Taro Weights

	WASTE COMP. INFORMATION:	Primary Fractions # (Before)	Fines # (After)
S	1. Paper - Newsprint (ONP)	5.7	5.7
S	2. Paper - Mixed Office (SOP)	5.7	5.7
S	3. Paper - Other (Magazines, Books, etc.)	5.7	5.7
2	4. Paper - Compostable	15.6	15.6 15.6
C	5. Cardboard - Corrugated (OCC)	15.6	15.6
M	6. Cardboard - Boxboard / Paperboard	8.2	8.2
S	7. Cardboard - Cartons Gable Top & Aseptic	5.5	5.5
M	8. Cardboard - Other	15.4	15.4
M	9. Plastic #1 - PET	8.3	8.3
M	10. Plastic #2 - HDPE	8.9	8.9
S	11. Plastic #3 - PVC	5.4	5.4
S	12. Plastic #5 - PP	5.6	5.6
C	13. Plastic - Bags & Stretch Film	15.6	15.6
M	14. Plastic - Other	8.8	8.8
M	15. Organics - Yard Waste	5.6	5.6
2-P	16. Organics - Food Waste	2.2	2.2
S	17. Organics - Other	8.4	8.4
M	18. Textiles	8.3	8.3
P	19. Ferrous Metal - Cans	2.3	2.3
P	20. Ferrous Metal - Other	1.8	1.8
P	21. Non-Ferrous Metal - UBC (Cans)	2.0	2.0
P	22. Non-Ferrous Metal - Other	2.2	2.2
S	23. Glass	5.8	5.8
S	24. Inorganic Material	8.7	8.7
S	25. Electronics - Regulated (Video Screens)	5.4	5.4
S	26. Electronics - Non-Reg (Circuit Boards)	5.4	5.4
S	27. Electronics - Small Appliances	5.4	5.4
S	28. Household Hazardous Waste - General	5.2	5.2
S	29. Household Hazardous Waste - Batteries	5.2	5.2
	30. Problem Wastes (Car Seats, etc.)		
	31. Special Wastes (Tires, etc.)		
	32. Solid Wastes Containing Mercury		

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 1		Date: July 24, 2023	
	Time: 7:20 AM		Person Recording: [illegible]	
HAULER INFORMATION:	Company Name: [illegible]			
TYPE OF LOAD:	Residential: [ ]	Industrial: [ ]	Commercial: [ ]	Mixed: [X]
ORIGINATION OF TRUCK:	Service Area: Bucher Co.			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 81,280			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		5.1 #	14.2 #	7.6 #
1. Paper - Newsprint (ONP)	8.9			
2. Paper - Mixed Office (SOP)	9.1			
3. Paper - Other (Magazines, Books, etc.)	9.1	100 %		
4. Paper - Compostable	53.8	%	%	%
5. Cardboard - Corrugated (OCC)	22.7			
6. Cardboard - Boxboard / Paperboard	13.1			
7. Cardboard - Cartons Gable Top & Aseptic	6.9			
8. Cardboard - Other	15.8	%	%	%
9. Plastic #1 - PET	15.9			
10. Plastic #2 - HDPE	12.6			
11. Plastic #3 - PVC	—			
12. Plastic #5 - PP	8.0			
13. Plastic - Bags & Stretch Film	33.1 + 30.9			
14. Plastic - Other	25.5	%	%	40 %
15. Organics - Yard Waste	(0.1)			
16. Organics - Food Waste	14.9		10 ~	
17. Organics - Other	17.2	%	90% ~ %	%
18. Textiles	19.1			
19. Ferrous Metal - Cans	4.6			
20. Ferrous Metal - Other	(3.9) 3.8	%	%	60 %
21. Non-Ferrous Metal - UBC (Cans)	4.9 + 4.2 + 2.8			
22. Non-Ferrous Metal - Other	7.5	%	%	%
23. Glass	8.3	%	%	%
24. Inorganic Material	(0.6)	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances	(1.1)			
28. Household Hazardous Waste - General	(1.6)			
29. Household Hazardous Waste - Batteries	(0.1)			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 2	Date: 01/25/2023		
	Time: 7:41 AM	Person Recording: [illegible]		
HAULER INFORMATION: [illegible]	Company Name:	Truck #: [illegible]		
TYPE OF LOAD:	Residential: ☒ Industrial: ☐	Commercial: ☐	Mixed: ☐	
ORIGINATION OF TRUCK:	Service Area: NE LANDF. II	CUTTER-HAIL Co.		
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 49540			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[illegible]	4.6#	3.1 #	#
1. Paper - Newsprint (ONP)	5.9			
2. Paper - Mixed Office (SOP)	10.6			
3. Paper - Other (Magazines, Books, etc.)	6.6	70 %		
4. Paper - Compostable	26.9	%	%	%
5. Cardboard - Corrugated (OCC)	17.7			
6. Cardboard - Boxboard / Paperboard	9.7			
7. Cardboard - Cartons Gable Top & Aseptic	6.2			
8. Cardboard - Other	18.7	%	%	%
9. Plastic #1 - PET	13.5			
10. Plastic #2 - HDPE	9.7			
11. Plastic #3 - PVC				
12. Plastic #5 - PP				
13. Plastic - Bags & Stretch Film				
14. Plastic - Other	11.8 + 4.5	30 %	%	%
15. Organics - Yard Waste	(26.3)			
16. Organics - Food Waste	14.0			
17. Organics - Other		%	%	%
18. Textiles	(2.2) + 30.6			
19. Ferrous Metal - Cans (11.1)	3.1			
20. Ferrous Metal - Other	2.8	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	12.3 + 5.0			
22. Non-Ferrous Metal - Other		%	%	%
23. Glass	21.4	%	%	%
24. Inorganic Material	36.2	%	%	%
25. Electronics - Regulated (Video Screens)	(0.6) cell phones			
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances	(3.8)			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	(3.5) drill Batteries + 0.7			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury	(0.1)	%	%	%

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 3		Date: July 27 2023	
	Time: 8:47 AM		Person Recording:	
HAULER INFORMATION: BALLARD	Company Name:		Truck #: 13,47	
TYPE OF LOAD: Red Cedar, Lo[illegible]	Residential: [ ]	Industrial: [ ]	Commercial: [X]	Mixed: [ ]
ORIGINATION OF TRUCK:	Service Area: Bellevue, [illegible]			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 71560			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		#	#	#
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	9.9			
3. Paper - Other (Magazines, Books, etc.)				
4. Paper - Compostable 30.0+	68.9+31.2	%	%	%
5. Cardboard - Corrugated (OCC)	17.2			
6. Cardboard - Boxboard / Paperboard	8.2			
7. Cardboard - Cartons Gable Top & Aseptic				
8. Cardboard - Other	16.3+	%	%	%
9. Plastic #1 - PET	10.2			
10. Plastic #2 - HDPE	—			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	7.0 [illegible]			
13. Plastic - Bags & Stretch Film 62,3 [illegible]	83.3+ [illegible]	12.8		
14. Plastic - Other 10.7	27.4+30.1	%	%	%
15. Organics - Yard Waste				
16. Organics - Food Waste	7.8			
17. Organics - Other	26.1+11.5	%	%	%
18. Textiles	9.8			
19. Ferrous Metal - Cans				
20. Ferrous Metal - Other		%	%	%
21. Non-Ferrous Metal - UBC (Cans)	2.8			
22. Non-Ferrous Metal - Other	2.8	%	%	%
23. Glass	7.2	%	%	%
24. Inorganic Material	11.4	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury		%	%	%

Picture C

65 10 15 [illegible] 13 5 15

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 11 Time: 9.07 A.M.	Date: Jul 4 2023 Person Recording:		
HAULER INFORMATION: Self	Company Name: Rob's Junk	Truck #:		
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [X]			
ORIGINATION OF TRUCK: Alb	Service Area: Cottonwood			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 37206			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		4.1 #	7.5 #	5.2 #
1. Paper - Newsprint (ONP)	8.9			
2. Paper - Mixed Office (SOP)	4.8	100%		
3. Paper - Other (Magazines, Books, etc.)	4.3			
4. Paper - Compostable	43.6 + 42.0	%	%	%
5. Cardboard - Corrugated (OCC)	18.5			
6. Cardboard - Boxboard / Paperboard	11.7			
7. Cardboard - Cartons Gable Top & Aseptic	6.4			
8. Cardboard - Other	18.0	%	%	%
9. Plastic #1 - PET	13.5			
10. Plastic #2 - HDPE	12.2			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	6.9			
13. Plastic - Bags & Stretch Film	31.2			
14. Plastic - Other	33.4 + 13.0	%	%	5% %
15. Organics - Yard Waste	6.0			
16. Organics - Food Waste	(15.7) + 25.1 + 20.4			
17. Organics - Other	(12.8) + 17.9	%	%	%
18. Textiles	13.9			80%
19. Ferrous Metal - Cans	6.1			
20. Ferrous Metal - Other	3.8	%	%	15% %
21. Non-Ferrous Metal - UBC (Cans)	3.6			
22. Non-Ferrous Metal - Other	3.4	%	%	%
23. Glass	7.1	%	%	%
24. Inorganic Material	13.4	%	100 %	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)	(0.5) + 1.0			
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	(0.1)			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury		%	%	%

C

115
7
10
2
235

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 5 Date: July 21 2023			
	Time: 9:30 AM. Person Recording:			
HAULER INFORMATION:	Company Name: Truck #:			
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [X]			
ORIGINATION OF TRUCK:	Service Area:			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 75 750			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		wet 6.8 #	10.9 #	7.2 #
1. Paper - Newsprint (ONP)	9.1			
2. Paper - Mixed Office (SOP)	9.9			
3. Paper - Other (Magazines, Books, etc.)	6.7	50%		
4. Paper - Compostable	32.5+40.7	%	%	%
5. Cardboard - Corrugated (OCC)	17.0			
6. Cardboard - Boxboard / Paperboard	10.1			
7. Cardboard - Cartons Gable Top & Aseptic	7.8			
8. Cardboard - Other	41.5	%	%	%
9. Plastic #1 - PET	12.5			
10. Plastic #2 - HDPE	11.3			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	7.2			
13. Plastic - Bags & Stretch Film	56.0			
14. Plastic - Other	19.0	50% %	%	10%%
15. Organics - Yard Waste	5.8			
16. Organics - Food Waste	20.0+15.6		100%	
17. Organics - Other	11.4	%	%	%
18. Textiles	12.5			60%
19. Ferrous Metal - Cans	4.3			
20. Ferrous Metal - Other	2.5	%	%	30%%
21. Non-Ferrous Metal - UBC (Cans)	4.5			
22. Non-Ferrous Metal - Other	4.7	%	%	%
23. Glass	7.3	%	%	%
24. Inorganic Material	13.9	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances	(5.4)			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

7.2

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 6 Date: July 28 2013
	Time: 9:45 AM Person Recording: Darby
HAULER INFORMATION:	Company Name: Truck #: 214 Hayden
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [X] Mixed: [ ]
ORIGINATION OF TRUCK: Alberta	Service Area: Alberta
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 36,350
	Outgoing Truck Weight (#):
	Weight of MSW (#): Estimating

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		9.6 #	9.0 #	12.6 #
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	7.6			
3. Paper - Other (Magazines, Books, etc.)	14.3	40%		
4. Paper - Compostable (20.2)	24.5+34.4	%	%	%
5. Cardboard - Corrugated (OCC)	16.8			
6. Cardboard - Boxboard / Paperboard	11.5			
7. Cardboard - Cartons Gable Top & Aseptic	6.1			
8. Cardboard - Other	23.0	%	%	%
9. Plastic #1 - PET	10.3			
10. Plastic #2 - HDPE	(1.4) 9.6			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	5.9			
13. Plastic - Bags & Stretch Film	32.8			
14. Plastic - Other	20.3	%	%	%
15. Organics - Yard Waste	7.9			
16. Organics - Food Waste	15.8	30%		
17. Organics - Other	(1.7) 39.3	10% %	%	%
18. Textiles 18.9	13.2			5%
19. Ferrous Metal - Cans	4.3			
20. Ferrous Metal - Other		%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.0			
22. Non-Ferrous Metal - Other	3.2	%	%	95 %
23. Glass	(0.5)	%	%	%
24. Inorganic Material	9.3	20 %	100 %	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances	(7.6) Battery Charger			
28. Household Hazardous Waste - General	(0.5)			
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

J. Sharpe Hauler

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 27 Date: July 27 2023
	Time: 9:49 AM Person Recording: Jacky
HAULER INFORMATION:	Company Name: Long Beach Transfer (LBT)
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [X]
ORIGINATION OF TRUCK:	Service Area: LONG BEACH
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 57,560
	Outgoing Truck Weight (#):
	Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		2.6 #	0 #	#
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	6.5			
3. Paper - Other (Magazines, Books, etc.)		80%		
4. Paper - Compostable	22.2	%	%	%
5. Cardboard - Corrugated (OCC) 16.3 +	(15.3) (20.2)			
6. Cardboard - Boxboard / Paperboard	8.8			
7. Cardboard - Cartons Gable Top & Aseptic				
8. Cardboard - Other	16.2	%	%	%
9. Plastic #1 - PET	9.9			
10. Plastic #2 - HDPE	9.2			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	7.0 + 7.3			
13. Plastic - Bags & Stretch Film	20.8			
14. Plastic - Other 9.7 +	(3.4) + (25.2)	20% %	%	%
15. Organics - Yard Waste				
16. Organics - Food Waste	12.5			
17. Organics - Other (40.1)	(60.2) (50.1)	%	%	%
18. Textiles				
19. Ferrous Metal - Cans	2.5			
20. Ferrous Metal - Other		%	%	%
21. Non-Ferrous Metal - UBC (Cans)	2.6			
22. Non-Ferrous Metal - Other		%	%	%
23. Glass		%	%	%
24. Inorganic Material		%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: B Date: 11.28.2023
	Time: 10:17 AM Person Recording:
HAULER INFORMATION:	Company Name: GFL ENVI. Truck #:
TYPE OF LOAD:	Residential: ☐ Industrial: ☐ Commercial: ☐ Mixed: ☐
ORIGINATION OF TRUCK:	Service Area: WADENA CO.
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 47300
	Outgoing Truck Weight (#):
	Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		3.9 #	9.2 #	#
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	15.5			
3. Paper - Other (Magazines, Books, etc.)	6.9	50%		
4. Paper - Compostable	4.6	%	%	%
5. Cardboard - Corrugated (OCC)	17.4			
6. Cardboard - Boxboard / Paperboard	11.1			
7. Cardboard - Cartons Gable Top & Aseptic	6.7			
8. Cardboard - Other	21.3	%	%	%
9. Plastic #1 - PET	12.6			
10. Plastic #2 - HDPE	9.7			
11. Plastic #3 - PVC	0.1			
12. Plastic #5 - PP	6.8			
13. Plastic - Bags & Stretch Film	13.3			
14. Plastic - Other 16.8		50% %	%	%
15. Organics - Yard Waste				
16. Organics - Food Waste 14.4+26.9	30.4		100%	
17. Organics - Other 25.2		%	%	%
18. Textiles	9.5			
19. Ferrous Metal - Cans	2.9			
20. Ferrous Metal - Other	2.5	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.8+3.9			
22. Non-Ferrous Metal - Other	2.9	%	%	%
23. Glass	9.1	%	%	%
24. Inorganic Material	17.9	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)	1.4 LAPTOP	0.4 Cell Phone		
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury		%	%	%

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 7 Time: 10:38 AM	Date: July 28 2023 Person Recording:		
HAULER INFORMATION:	Company Name: Mal-Template Corp	Vehicle #:		
TYPE OF LOAD:	Residential: [ ] Industrial: [ ]	Commercial: [ ]	Mixed: [X]	
ORIGINATION OF TRUCK:	Service Area: Peterborough			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 81,700			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines #	GROSS WEIGHT Bottom Fines #	Non-Separable #
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)				
3. Paper - Other (Magazines, Books, etc.)				
4. Paper - Compostable	30.1	%	%	%
5. Cardboard - Corrugated (OCC)	(20.2 + 16.6)			
6. Cardboard - Boxboard / Paperboard				
7. Cardboard - Cartons Gable Top & Aseptic				
8. Cardboard - Other		%	%	%
9. Plastic #1 - PET				
10. Plastic #2 - HDPE				
11. Plastic #3 - PVC				
12. Plastic #5 - PP				
13. Plastic - Bags & Stretch Film	20.1			
14. Plastic - Other	(15.0)	%	%	%
15. Organics - Yard Waste				
16. Organics - Food Waste	(14.1 + 22.1)			
17. Organics - Other (5.6) Diapers Adult		%	%	%
18. Textiles				
19. Ferrous Metal - Cans		%	%	%
20. Ferrous Metal - Other				
21. Non-Ferrous Metal - UBC (Cans)		%	%	%
22. Non-Ferrous Metal - Other		%	%	%
23. Glass		%	%	%
24. Inorganic Material				
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 10 Time: 11:30 AM	Date: 7/24/2023 Person Recording: [illegible]		
HAULER INFORMATION:	Company Name: Slick Sanitation	Truck #: Uplands Grey		
TYPE OF LOAD:	Residential: ☐ Industrial: ☐	Commercial: ☐	Mixed: ☑	
ORIGINATION OF TRUCK:	Service Area: Becker County			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 33160			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		4.3 #	8.2 #	9.3 #
1. Paper - Newsprint (ONP)	6.8			
2. Paper - Mixed Office (SOP)	6.5	80%		
3. Paper - Other (Magazines, Books, etc.)	4.1			
4. Paper - Compostable	42.0	%	%	%
5. Cardboard - Corrugated (OCC)	(40.0) +8.7			
6. Cardboard - Boxboard / Paperboard	2.3			
7. Cardboard - Cartons Gable Top & Aseptic	6.6			
8. Cardboard - Other	17.3	%	%	%
9. Plastic #1 - PET	10.5			
10. Plastic #2 - HDPE	10.7			
11. Plastic #3 - PVC	—			
12. Plastic #5 - PP	6.5			
13. Plastic - Bags & Stretch Film	24.0			
14. Plastic - Other	17.7	20% %	%	%
15. Organics - Yard Waste	5.7			
16. Organics - Food Waste 17.4+	29.1 +20.0	100%	100%	
17. Organics - Other	18.2	%	%	%
18. Textiles	(2.1) +10.5			
19. Ferrous Metal - Cans	5.8			
20. Ferrous Metal - Other	4.1	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	2.7			
22. Non-Ferrous Metal - Other	4.0	%	%	40 %
23. Glass	8.2	%	%	%
24. Inorganic Material	14.9 +0.1	%	%	60 %
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances	(0.1)			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	(0.1)			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

1 - Sharps Needle

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: [illegible] 11	Date: 7/24/23		
	Time: 12:31 PM	Person Recording: [illegible]		
HAULER INFORMATION:	Company Name: [illegible]	Truck #: [illegible]		
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [X]			
ORIGINATION OF TRUCK:	Service Area: [illegible]			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 34,910			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		4.1 #	5.6 #	6.4 #
1. Paper - Newsprint (ONP)	5.9			
2. Paper - Mixed Office (SOP)	8.8			
3. Paper - Other (Magazines, Books, etc.)	7.6	10 %		
4. Paper - Compostable	29.1 +	%	%	%
5. Cardboard - Corrugated (OCC)	17.2			
6. Cardboard - Boxboard / Paperboard	17.1			
7. Cardboard - Cartons Gable Top & Aseptic	5.8			
8. Cardboard - Other	19.5	%	%	%
9. Plastic #1 - PET	14.0			
10. Plastic #2 - HDPE	10.7			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	6.5			
13. Plastic - Bags & Stretch Film	26.2			
14. Plastic - Other	18.0	90 %	%	10 %
15. Organics - Yard Waste	(32.1)			
16. Organics - Food Waste 23.2+	74.4+13.7		100%	
17. Organics - Other	19.6	%	%	85 % 5%
18. Textiles	15.8			
19. Ferrous Metal - Cans	4.5			
20. Ferrous Metal - Other	2.1+21.2	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	4.1			
22. Non-Ferrous Metal - Other	3.4	%	%	%
23. Glass	10.8	%	%	%
24. Inorganic Material	16.2	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: [redacted] Date: 7/24/2023 Time: 12:41 P.M. Person Recording: [illegible]
HAULER INFORMATION: [illegible]	Company Name: [illegible] Truck #: [illegible]
TYPE OF LOAD:	Residential: ☐ Industrial: [ ] Commercial: [ ] Mixed: [ ]
ORIGINATION OF TRUCK:	Service Area: OTHER: N/A
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 18,670 Outgoing Truck Weight (#): Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[redacted]	11.6 #	5.2 #	#
1. Paper - Newsprint (ONP)	7.4			
2. Paper - Mixed Office (SOP)	11.9	10%		
3. Paper - Other (Magazines, Books, etc.)				
4. Paper - Compostable	22.6+35.5	%	%	%
5. Cardboard - Corrugated (OCC)	(15.3) +16.9			
6. Cardboard - Boxboard / Paperboard	20.0 +11.1			
7. Cardboard - Cartons Gable Top & Aseptic	7.0			
8. Cardboard - Other	[illegible] 19.3	%	%	%
9. Plastic #1 - PET	9.9			
10. Plastic #2 - HDPE	(9.9) +10.9			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	7.2			
13. Plastic - Bags & Stretch Film	35.0			
14. Plastic - Other	16.9 + (15.5) 19.2	[illegible]90 %	%	%
15. Organics - Yard Waste	6.2			
16. Organics - Food Waste	21.6 + 9.8			
17. Organics - Other	71.0+18.9	%	100 %	%
18. Textiles	(0.2)			
19. Ferrous Metal - Cans	3.4			
20. Ferrous Metal - Other	1.9	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.7			
22. Non-Ferrous Metal - Other	4.7	%	%	%
23. Glass	9.0	%	%	%
24. Inorganic Material	18.8	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury		%	%	%

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: [redacted] 13 Date: 7/24/23
	Time: 12:41 PM Person Recording: Jacky
HAULER INFORMATION:	Company Name: [illegible] Truck #: 21
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [X]
ORIGINATION OF TRUCK:	Service Area: Local
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 71,760
	Outgoing Truck Weight (#):
	Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[redacted]	5.4 #	7.0 #	#
1. Paper - Newsprint (ONP)	5.9			
2. Paper - Mixed Office (SOP)	8.2	90 %		
3. Paper - Other (Magazines, Books, etc.)	7.0			
4. Paper - Compostable	19.4+37.5	%	%	%
5. Cardboard - Corrugated (OCC)	19.6			
6. Cardboard - Boxboard / Paperboard	30.4			
7. Cardboard - Cartons Gable Top & Aseptic	11.1			
8. Cardboard - Other	27.9	%	%	%
9. Plastic #1 - PET	12.8			
10. Plastic #2 - HDPE	10.5			
11. Plastic #3 - PVC	—			
12. Plastic #5 - PP	7.0			
13. Plastic - Bags & Stretch Film	35.2			
14. Plastic - Other	18.8	10 %	%	%
15. Organics - Yard Waste	6.7			
16. Organics - Food Waste	22.0 + 14.2 + 20.4		100 %	
17. Organics - Other	0.3 10.9	%	%	%
18. Textiles	12.3			
19. Ferrous Metal - Cans	2.7			
20. Ferrous Metal - Other	2.1	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.8			
22. Non-Ferrous Metal - Other	3.2	%	%	%
23. Glass	7.0	%	%	%
24. Inorganic Material	10.5	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)	3.6 0.1			
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	0.1			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury		%	%	%

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 14 Date: 7/24/23 Time: 1:30 P.M. Person Recording: Jacky			
HAULER INFORMATION:	Company Name: Truck #:			
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [ ]			
ORIGINATION OF TRUCK:	Service Area: Wilkes Co.			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 44,340 Outgoing Truck Weight (#): Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines 4.0 #	GROSS WEIGHT Bottom Fines 13.1 #	Non-Separable #
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	8.2	60%		
3. Paper - Other (Magazines, Books, etc.)	53.8			
4. Paper - Compostable	27.7+30.8	%	%	%
5. Cardboard - Corrugated (OCC)	24.0			
6. Cardboard - Boxboard / Paperboard	8.7			
7. Cardboard - Cartons Gable Top & Aseptic	5.7			
8. Cardboard - Other	32.4	%	%	%
9. Plastic #1 - PET	10.8			
10. Plastic #2 - HDPE	17.0			
11. Plastic #3 - PVC	—			
12. Plastic #5 - PP	6.7			
13. Plastic - Bags & Stretch Film	33.4			
14. Plastic - Other	12.9	40% %	%	%
15. Organics - Yard Waste				
16. Organics - Food Waste	12.2		50%	
17. Organics - Other	24.2	%	%	%
18. Textiles	9.0			
19. Ferrous Metal - Cans	2.5			
20. Ferrous Metal - Other	(5.6)+2.2	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	2.5			
22. Non-Ferrous Metal - Other	6.5	%	%	%
23. Glass		%	%	%
24. Inorganic Material	13.9	%	50% %	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: [redacted] 15	Date: 7/24/23		
	Time: 1[illegible] P.M.	Person Recording: [illegible]		
HAULER INFORMATION:	Company Name: [illegible]	Truck #: 51		
TYPE OF LOAD:	Residential: [ ] Industrial: [ ]	Commercial: [ ] Mixed: [X]		
ORIGINATION OF TRUCK:	Service Area: [illegible]			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 11,7[illegible]			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions [redacted]	GROSS WEIGHT Top Fines 4.0 #	GROSS WEIGHT Bottom Fines 11.6 #	Non-Separable #
1. Paper - Newsprint (ONP)	[illegible]			
2. Paper - Mixed Office (SOP)	7.6			
3. Paper - Other (Magazines, Books, etc.)	6.6	60%		
4. Paper - Compostable 24.5	33.7	%	%	%
5. Cardboard - Corrugated (OCC)	16.4			
6. Cardboard - Boxboard / Paperboard	11.1			
7. Cardboard - Cartons Gable Top & Aseptic	7.8			
8. Cardboard - Other	22.6	%	%	%
9. Plastic #1 - PET	14.4			
10. Plastic #2 - HDPE	10.3			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	7.1			
13. Plastic - Bags & Stretch Film	32.8			
14. Plastic - Other	17.2	40% %	%	%
15. Organics - Yard Waste	28.0			
16. Organics - Food Waste 24.7 + 16.9	19.0		100% Human food or animal fe	
17. Organics - Other 19.8	(4.2)	%	%	%
18. Textiles	(4.7) + 15.9			
19. Ferrous Metal - Cans	5.4			
20. Ferrous Metal - Other	2.1	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.4			
22. Non-Ferrous Metal - Other	3.3	%	%	%
23. Glass	9.5	%	%	%
24. Inorganic Material	15.7	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	(0.2)			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Apparently the egg cartons were getting hot in the warehouse and had to be removed before they started a fire!

Visual

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: [redacted] 16 Date: July [redacted] 25 2023
	Time: 6:37 a.m. Person Recording: [redacted]
HAULER INFORMATION:	Company Name: [redacted] Truck #: [redacted]
TYPE OF LOAD:	Residential: ☐ Industrial: ☐ Commercial: ☒ Mixed: ☐
ORIGINATION OF TRUCK:	Service Area: Olivia
Approx. Lt. of egg Cartons MSW LOAD WEIGHT: and three	Incoming Truck Weight (#): 37020
	Outgoing Truck Weight (#):
	Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		0 #	0 #	25.5 #
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	5.8			
3. Paper - Other (Magazines, Books, etc.)				
4. Paper - Compostable 24.9+(100.0)	Egg Cartons	%	%	%
5. Cardboard - Corrugated (OCC) 16.1	Small amt OCC 1%			
6. Cardboard - Boxboard / Paperboard	(0.3)			
7. Cardboard - Cartons Gable Top & Aseptic				
8. Cardboard - Other	~~Paper~~ 16.1	%	%	%
9. Plastic #1 - PET	(0.1)			
10. Plastic #2 - HDPE				
11. Plastic #3 - PVC				
12. Plastic #5 - PP	5.7			
13. Plastic - Bags & Stretch Film	24.5			
14. Plastic - Other 9.2	Tiny amt plastic egg	Cartons %		%
15. Organics - Yard Waste				
16. Organics - Food Waste	9.4 + 6.2			
17. Organics - Other (20.7+9.3+(35.2)	General Wood pallets %		%	5% 6% 2
18. Textiles	10.4			
19. Ferrous Metal - Cans	(0.3)			[redacted]
20. Ferrous Metal - Other		%	%	5%
21. Non-Ferrous Metal - UBC (Cans)				
22. Non-Ferrous Metal - Other		%	%	%
23. Glass		%	%	%
24. Inorganic Material		%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury		%	%	%

C

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 17		Date: 7/23/2	
	Time: 6:30/7:00		Person Recording:	
HAULER INFORMATION:	Company Name: [illegible]		Truck #:	
TYPE OF LOAD:	Residential: ☐	Industrial: [ ]	Commercial: [ ]	Mixed: X
ORIGINATION OF TRUCK:	Service Area: Cranston CC			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 43,540			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		4.2 #	6.7 #	(0.3) #
1. Paper - Newsprint (ONP)	7.4			
2. Paper - Mixed Office (SOP)	9.2			
3. Paper - Other (Magazines, Books, etc.)	(0.8)	80%		
4. Paper - Compostable	(20.2) 33.1 + 39.6	%	%	%
5. Cardboard - Corrugated (OCC)	19.6			
6. Cardboard - Boxboard / Paperboard	10.9			
7. Cardboard - Cartons Gable Top & Aseptic	7.2			
8. Cardboard - Other	24.4	%	%	%
9. Plastic #1 - PET	14.4			
10. Plastic #2 - HDPE	11.6			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	7.4			
13. Plastic - Bags & Stretch Film	34.3			
14. Plastic - Other	23.6	10% %	%	%
15. Organics - Yard Waste				
16. Organics - Food Waste	15.6 + 9.8	5%	100%	
17. Organics - Other	14.7	5 %	%	10 %
18. Textiles	16.3 + (20.0)			
19. Ferrous Metal - Cans	3.9			
20. Ferrous Metal - Other	1.8	%	%	90 %
21. Non-Ferrous Metal - UBC (Cans)	5.1			
22. Non-Ferrous Metal - Other	3.7	%	%	%
23. Glass	1.9	%	%	%
24. Inorganic Material		%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)	(0.9)			
27. Electronics - Small Appliances	(0.2)			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	6.4			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: [redacted]		Date: 7/25/23	
	Time: 6:18 AM		Person Recording: Jay	
HAULER INFORMATION:	Company Name: T.N.T. Co		Truck #: 31	
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [X]			
ORIGINATION OF TRUCK:	Service Area: T.N.T. Co			
MSW LOAD WEIGHT: Mixed Food	Incoming Truck Weight (#): 80,610			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[redacted]	5.5 #	4.9 #	#
1. Paper - Newsprint (ONP)	6.0			
2. Paper - Mixed Office (SOP)	6.7			
3. Paper - Other (Magazines, Books, etc.)		65%		
4. Paper - Compostable	37.8+44.0	%	%	%
5. Cardboard - Corrugated (OCC)	19.9			
6. Cardboard - Boxboard / Paperboard	8.9			
7. Cardboard - Cartons Gable Top & Aseptic	6.0			
8. Cardboard - Other	3.8	%	%	%
9. Plastic #1 - PET	14.5			
10. Plastic #2 - HDPE	11.2			
11. Plastic #3 - PVC	—			
12. Plastic #5 - PP	6.9			
13. Plastic - Bags & Stretch Film	40.2			
14. Plastic - Other	17.2	35 %	%	%
15. Organics - Yard Waste				
16. Organics - Food Waste 22.3	24.9+9.7		50%	
17. Organics - Other	19.1	%	%	%
18. Textiles	14.7			
19. Ferrous Metal - Cans	4.6			
20. Ferrous Metal - Other		%	%	%
21. Non-Ferrous Metal - UBC (Cans)	22.0			
22. Non-Ferrous Metal - Other	7.5	%	%	%
23. Glass	15.1	%	%	%
24. Inorganic Material	16.3	%	50 % %	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 19		Date: 7/25/23	
	Time: 8:30 AM		Person Recording: Jody	
HAULER INFORMATION: Burrtec	Company Name: Burrtec		Truck #: 40 Roll off	
TYPE OF LOAD:	Residential: [ ]	Industrial: [X]	Commercial: [ ]	Mixed: [ ]
ORIGINATION OF TRUCK:	Service Area: Mira Loma Bloomington Area			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 70,170			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		#	#	#
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	6.0			
3. Paper - Other (Magazines, Books, etc.)	(6.1)			
4. Paper - Compostable	16.9 +	%	%	%
5. Cardboard - Corrugated (OCC) (65.4)	18.9 + (61.2)			
6. Cardboard - Boxboard / Paperboard	9.0			
7. Cardboard - Cartons Gable Top & Aseptic				
8. Cardboard - Other	15.9	%	%	%
9. Plastic #1 - PET	8.8			
10. Plastic #2 - HDPE	9.4 + (21.0)			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	5.8			
13. Plastic - Bags & Stretch Film	23.3			
14. Plastic - Other (26.0)	(24.0) + 14.5	%	%	%
15. Organics - Yard Waste				
16. Organics - Food Waste	3.7			
17. Organics - Other	9.0	%	%	%
18. Textiles	8.5			
19. Ferrous Metal - Cans				
20. Ferrous Metal - Other		%	%	%
21. Non-Ferrous Metal - UBC (Cans)	2.2			
22. Non-Ferrous Metal - Other	2.4	%	%	%
23. Glass		%	%	%
24. Inorganic Material		%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances	(0.6)			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury	(0.4)	%	%	%

Plastic Bands + Large Turnen Plastic Bags.
Large Amt of OCC
5 Gal Plastic Pails

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 20,	Date: 7/25/23		
	Time: 8:[illegible] AM	Person Recording: [illegible]		
HAULER INFORMATION:	Company Name: [illegible]	Truck #: [illegible]		
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [X] Mixed: [ ]			
ORIGINATION OF TRUCK:	Service Area: [illegible]			
MSW LOAD WEIGHT: [illegible]	Incoming Truck Weight (#): 37,990			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION: 2 pieces	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[redacted]	#	6.2 #	#
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	6.4			
3. Paper - Other (Magazines, Books, etc.)				
4. Paper - Compostable	25.3+	%	%	%
5. Cardboard - Corrugated (OCC)	16.2			
6. Cardboard - Boxboard / Paperboard	9.6+			
7. Cardboard - Cartons Gable Top & Aseptic	(0.1)			
8. Cardboard - Other	16.4	%	%	%
9. Plastic #1 - PET	9.2			
10. Plastic #2 - HDPE	(0.1)			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	5.9			
13. Plastic - Bags & Stretch Film	31.6 + 60.0			
14. Plastic - Other	10.3 + (15.3)	%	%	%
15. Organics - Yard Waste				
16. Organics - Food Waste	11.2 + (100.0)		100 %	
17. Organics - Other	9.5	%	%	%
18. Textiles	8.9			
19. Ferrous Metal - Cans				
20. Ferrous Metal - Other (2.7)		%	%	%
21. Non-Ferrous Metal - UBC (Cans)	2.5			
22. Non-Ferrous Metal - Other	(0.1)	%	%	%
23. Glass		%	%	%
24. Inorganic Material				
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

C

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 21 Time: 12:07	Date: 1/31/23 Person Recording:		
HAULER INFORMATION:	Company Name: S-RIC Truck #:			
TYPE OF LOAD:	Residential: ☐ Industrial: ☐ Commercial: ☐ Mixed: ☐			
ORIGINATION OF TRUCK:	Service Area: Oldham County			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 35,500			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		4.2 #	5.2 #	9.7 # wood chips
1. Paper - Newsprint (ONP)	6.0			
2. Paper - Mixed Office (SOP)	17.6			
3. Paper - Other (Magazines, Books, etc.)	10.0	70%		
4. Paper - Compostable	22.7+30.6	%	%	%
5. Cardboard - Corrugated (OCC)	16.7			
6. Cardboard - Boxboard / Paperboard	12.5			
7. Cardboard - Cartons Gable Top & Aseptic	6.2			
8. Cardboard - Other	18.8+24.1	%	%	%
9. Plastic #1 - PET	13.4			
10. Plastic #2 - HDPE	13.7			
11. Plastic #3 - PVC	0.2 (16.5)			
12. Plastic #5 - PP	7.2			
13. Plastic - Bags & Stretch Film	26.7			
14. Plastic - Other	22.5 (16.5)	30% %	%	%
15. Organics - Yard Waste	10.8			
16. Organics - Food Waste	16.3+16.9+8.6		100%	
17. Organics - Other	21.6	%	%	95 wood chips
18. Textiles	10.1			
19. Ferrous Metal - Cans	5.9			5%
20. Ferrous Metal - Other	3.2	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.9+3.5			
22. Non-Ferrous Metal - Other	3.4	%	%	%
23. Glass	6.8	%	%	%
24. Inorganic Material		%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)	0.2			
27. Electronics - Small Appliances	0.7 (17)			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	6.1			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)	2.3			
32. Solid Wastes Containing Mercury		%	%	%

I Shupe

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 23		Date: 7/25/19	
	Time: 12:20		Person Recording: JM A.	
HAULER INFORMATION:	Company Name: Steve Sabian		Truck #: Trash Valet	
TYPE OF LOAD:	Residential: ☐ Industrial: ☐ Commercial: ☐ Mixed: ☒			
ORIGINATION OF TRUCK:	Service Area: Other			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 32680			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		5.2 #	11.3 #	#
1. Paper - Newsprint (ONP)	7.9			
2. Paper - Mixed Office (SOP)	9.0			
3. Paper - Other (Magazines, Books, etc.)	9.2	90%		
4. Paper - Compostable	38.3	%	%	%
5. Cardboard - Corrugated (OCC)	21.3			
6. Cardboard - Boxboard / Paperboard	13.0			
7. Cardboard - Cartons Gable Top & Aseptic	6.4			
8. Cardboard - Other	19.1	%	%	%
9. Plastic #1 - PET	12.5			
10. Plastic #2 - HDPE	10.6			
11. Plastic #3 - PVC	—			
12. Plastic #5 - PP	7.3			
13. Plastic - Bags & Stretch Film	35.8			
14. Plastic - Other	14.6 + 18.7	10 %	%	%
15. Organics - Yard Waste	20.0			
16. Organics - Food Waste	14.7			
17. Organics - Other	24.7	%	%	%
18. Textiles	20.6			
19. Ferrous Metal - Cans	10.5			
20. Ferrous Metal - Other	4.2	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.8			
22. Non-Ferrous Metal - Other 4.8	22.2 + 20.2	%	%	%
23. Glass	9.7	%	%	%
24. Inorganic Material	14.7	%	100 % Sand	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)	0.1			
27. Electronics - Small Appliances	0.9			
28. Household Hazardous Waste - General	1.4			
29. Household Hazardous Waste - Batteries	0.2			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury		%	%	%

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: [illegible] Date: 11/23/23 Time: 12:17 Person Recording: [illegible]
HAULER INFORMATION:	Company Name: [illegible] Truck # 21
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [X]
ORIGINATION OF TRUCK:	Service Area: Todd County
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 18800
	Outgoing Truck Weight (#):
	Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		7.1 #	7.8 #	#
1. Paper - Newsprint (ONP)	0.3			
2. Paper - Mixed Office (SOP)	12.7			
3. Paper - Other (Magazines, Books, etc.)	9.4	50%		
4. Paper - Compostable	39.1	%	%	%
5. Cardboard - Corrugated (OCC)	42.1			
6. Cardboard - Boxboard / Paperboard	11.5			
7. Cardboard - Cartons Gable Top & Aseptic	6.1			
8. Cardboard - Other	20.6	%	%	%
9. Plastic #1 - PET	11.4			
10. Plastic #2 - HDPE	14.7			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	7.4			
13. Plastic - Bags & Stretch Film	36.1			
14. Plastic - Other	26.0	50% %	%	%
15. Organics - Yard Waste				
16. Organics - Food Waste	21.9 + 5.5			
17. Organics - Other	44.3	%	%	%
18. Textiles	19.9			
19. Ferrous Metal - Cans	4.9			
20. Ferrous Metal - Other	2.0	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.5			
22. Non-Ferrous Metal - Other		%	%	%
23. Glass	10.4	%	%	%
24. Inorganic Material	13.7	%	100 %	~~100~~ %
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	5.8			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury		%	%	%

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 37 Time: 12:21	Date: 7/25/23 Person Recording:
HAULER INFORMATION:	Company Name: [illegible]	Truck #: [illegible]
TYPE OF LOAD:	Residential: ☐ Industrial: ☐	Commercial: ☐ Mixed: ☐
ORIGINATION OF TRUCK:	Service Area: [illegible]	
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 39560	
	Outgoing Truck Weight (#):	
	Weight of MSW (#):	

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[illegible]	5.8 #	8.2 #	14.3 #
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)				
3. Paper - Other (Magazines, Books, etc.)		80%		
4. Paper - Compostable	51.6	%	%	%
5. Cardboard - Corrugated (OCC)	16.6			
6. Cardboard - Boxboard / Paperboard	9.6			
7. Cardboard - Cartons Gable Top & Aseptic	5.8			
8. Cardboard - Other	19.8	%	%	%
9. Plastic #1 - PET	12.2			
10. Plastic #2 - HDPE	10.5			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	6.6			
13. Plastic - Bags & Stretch Film	31.7			
14. Plastic - Other	(3.5) +16.4	20 %	%	90% %
15. Organics - Yard Waste	10.3			
16. Organics - Food Waste	15.3+ 21.8		80%	
17. Organics - Other	27.8	%	%	%
18. Textiles	11.4			
19. Ferrous Metal - Cans	3.3			
20. Ferrous Metal - Other	4.0	%	%	10% %
21. Non-Ferrous Metal - UBC (Cans)	5.7+3.2			
22. Non-Ferrous Metal - Other		%	%	%
23. Glass	8.2	%	%	%
24. Inorganic Material (2.4)	(34.0) Rocks	%	20 % %	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances	Only			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	5.4			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury		%	%	%

C

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 35 Date: 7/25/23 Time: 12:30 PM Person Recording:
HAULER INFORMATION:	Company Name: Mines Truck #:
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [X]
ORIGINATION OF TRUCK:	Service Area: Berlin Co.
MSW LOAD WEIGHT: Transfer Trailer	Incoming Truck Weight (#): 46,900
	Outgoing Truck Weight (#):
	Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		24.1 #	12.0 #	2.7 #
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	5.9			
3. Paper - Other (Magazines, Books, etc.)	4.0	20%		
4. Paper - Compostable	35.2	%	%	%
5. Cardboard - Corrugated (OCC)	16.9			
6. Cardboard - Boxboard / Paperboard	9.4			
7. Cardboard - Cartons Gable Top & Aseptic	6.4			
8. Cardboard - Other	25.4	%	%	%
9. Plastic #1 - PET	11.0			
10. Plastic #2 - HDPE	10.6			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	6.8			
13. Plastic - Bags & Stretch Film	38.8			
14. Plastic - Other (5.5) + 18.4	61.3 47.9	20% %	%	90 %
15. Organics - Yard Waste	12.2			
16. Organics - Food Waste	7.5 / 14.0			
17. Organics - Other	17.4	%	%	%
18. Textiles	20.0			
19. Ferrous Metal - Cans	3.3			
20. Ferrous Metal - Other	3.3	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	4.4			
22. Non-Ferrous Metal - Other	4.4	%	%	10 %
23. Glass	10.1	%	%	%
24. Inorganic Material	12.6	%	100% fines	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury		%	%	%

Everything wet, heavy, & smushed - Transfer Trailer
Top fines heavy & mixture of all "stuff"

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 36 Date: 7/25/23			
	Time: 11:30 AM Person Recording:			
HAULER INFORMATION:	Company Name: Cal-Co. Truck #: [redacted]			
TYPE OF LOAD:	Residential: ☐ Industrial: ☑ Commercial: ☐ Mixed: ☑			
ORIGINATION OF TRUCK:	Service Area: Clay Co.			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 80,120			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[redacted]	WET 16.1 #	7.0 #	#
1. Paper - Newsprint (ONP)	(0.1)			
2. Paper - Mixed Office (SOP)	1.6			
3. Paper - Other (Magazines, Books, etc.)	(0.3)	90%		
4. Paper - Compostable	44.6	%	%	%
5. Cardboard - Corrugated (OCC)	16.1			
6. Cardboard - Boxboard / Paperboard	12.4			
7. Cardboard - Cartons Gable Top & Aseptic	6.7			
8. Cardboard - Other	17.1	%	%	%
9. Plastic #1 - PET	11.2			
10. Plastic #2 - HDPE	9.4			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	6.9			
13. Plastic - Bags & Stretch Film	31.7			
14. Plastic - Other	22.0	10% %	%	%
15. Organics - Yard Waste	34.7			
16. Organics - Food Waste	25.6 + 18.2	#	40%	
17. Organics - Other	28.4	%	%	%
18. Textiles	27.4 + (6.6)			
19. Ferrous Metal - Cans	7.9			
20. Ferrous Metal - Other	2.7	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.4			
22. Non-Ferrous Metal - Other	3.87 (3.6)	%	%	%
23. Glass	11.2	%	%	%
24. Inorganic Material		%	60 %	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances	(0.7)			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	5.7			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 27		Date: 7/25/23	
	Time: [illegible]		Person Recording:	
HAULER INFORMATION:	Company Name: [illegible]		Truck #: [illegible]	
TYPE OF LOAD:	Residential: [ ]	Industrial: [ ]	Commercial: [ ]	Mixed: [X]
ORIGINATION OF TRUCK:	Service Area: [illegible] Co.			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 77,810			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[illegible]	6.6 #	8.5 #	#
1. Paper - Newsprint (ONP)	—	[illegible]		
2. Paper - Mixed Office (SOP)	9.1			
3. Paper - Other (Magazines, Books, etc.)	1.6	60%		
4. Paper - Compostable	46.2	%	%	%
5. Cardboard - Corrugated (OCC)	16.3			
6. Cardboard - Boxboard / Paperboard	12.5			
7. Cardboard - Cartons Gable Top & Aseptic	6.5			
8. Cardboard - Other	21.8	%	%	%
9. Plastic #1 - PET	11.1			
10. Plastic #2 - HDPE	10.1			
11. Plastic #3 - PVC	—			
12. Plastic #5 - PP	7.2			
13. Plastic - Bags & Stretch Film	32.5			
14. Plastic - Other	20.9 + 17.8	40 %	%	%
15. Organics - Yard Waste	9.8			
16. Organics - Food Waste 10.3 + 16.7	20.4 + 10.4		30%	
17. Organics - Other	25.0	%	%	%
18. Textiles	18.0			
19. Ferrous Metal - Cans	9.3			
20. Ferrous Metal - Other	2.7	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.1			
22. Non-Ferrous Metal - Other	3.0	%	%	%
23. Glass	8.9	%	%	%
24. Inorganic Material	28.4	%	70 %	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)	0.1			
27. Electronics - Small Appliances	0.2			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	6.4			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 35 Time: 7:18 A.M.	Date: 7/26/23 Person Recording: Judy		
HAULER INFORMATION:	Company Name:	Truck #:		
TYPE OF LOAD:	Residential: ☐ Industrial: ☐ Commercial: ☑ Mixed: ☐			
ORIGINATION OF TRUCK:	Service Area: Otter Tail Solid Waste			
Tuttle Transfer Road **MSW LOAD WEIGHT:**	Incoming Truck Weight (#):			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		0 #	(0.6) #	#
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)				
3. Paper - Other (Magazines, Books, etc.)				
4. Paper - Compostable	16.8	%	%	%
5. Cardboard - Corrugated (OCC)	(1.9)			
6. Cardboard - Boxboard / Paperboard 8.6	(10.0) Paper Bags			
7. Cardboard - Cartons Gable Top & Aseptic				
8. Cardboard - Other	15.9	%	%	%
9. Plastic #1 - PET	9.1			
10. Plastic #2 - HDPE	—			
11. Plastic #3 - PVC	(0.3)			
12. Plastic #5 - PP				
13. Plastic - Bags & Stretch Film	(10.2)+17.7			
14. Plastic - Other 18.2 —	(70.0) Plastic Bags	%	%	%
15. Organics - Yard Waste				
16. Organics - Food Waste all food & soiled	(95.0)+4.6			
17. Organics - Other		%	%	%
18. Textiles 18.1	(19.0)			
19. Ferrous Metal - Cans	2.8			
20. Ferrous Metal - Other	4.6	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.0			
22. Non-Ferrous Metal - Other	2.7	%	100 % %	%
23. Glass		%	%	%
24. Inorganic Material		%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	(0.2) (1.8)			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 1 Time: 8:15, 11:11	Date: 7/26/23 Person Recording:		
HAULER INFORMATION:	Company Name: [illegible]	Truck #: [illegible]		
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [X]			
ORIGINATION OF TRUCK:	Service Area: Other Than L			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 35,720			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		4.5 #	7.1 #	#
1. Paper - Newsprint (ONP)	6.0			
2. Paper - Mixed Office (SOP)	8.9			
3. Paper - Other (Magazines, Books, etc.)	9.0	80 %		
4. Paper - Compostable	23.4 (30.1) + 45.5	%	%	%
5. Cardboard - Corrugated (OCC)	17.3			
6. Cardboard - Boxboard / Paperboard	11.81			
7. Cardboard - Cartons Gable Top & Aseptic	6.0			
8. Cardboard - Other	22.4	%	%	%
9. Plastic #1 - PET	11.3			
10. Plastic #2 - HDPE	4.7			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	7.3			
13. Plastic - Bags & Stretch Film	35.7 + 18.3			
14. Plastic - Other	16.2 + 12.9	20 % %	%	%
15. Organics - Yard Waste	(11.3) + 9.9			
16. Organics - Food Waste	15.6 + 10.5		50 %	
17. Organics - Other	14.2	%	%	%
18. Textiles	13.4			
19. Ferrous Metal - Cans	2.3 5.3	%	%	%
20. Ferrous Metal - Other				
21. Non-Ferrous Metal - UBC (Cans)	3.6 + 2.7	%	%	%
22. Non-Ferrous Metal - Other	4.6	%	50 % %	%
23. Glass	6.9	%	%	%
24. Inorganic Material	16.9			
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)	(03) 28			
27. Electronics - Small Appliances	(1.3) 2.8			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury	(0.4)			

Pictures

Lighter lit on this one!

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 30 Date: 7/24/23 Time: 8:11 AM Person Recording: Jacob
HAULER INFORMATION:	Company Name: J & R Co. Truck #: 31
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [X]
ORIGINATION OF TRUCK:	Service Area: J & R Co.
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 79560 Outgoing Truck Weight (#): Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		55.1 #	12.0 #	#
1. Paper - Newsprint (ONP)	6.4			
2. Paper - Mixed Office (SOP)	7.2			
3. Paper - Other (Magazines, Books, etc.)	—			
4. Paper - Compostable	31.5	%	%	%
5. Cardboard - Corrugated (OCC)	17.4			
6. Cardboard - Boxboard / Paperboard	8.8			
7. Cardboard - Cartons Gable Top & Aseptic	6.6			
8. Cardboard - Other	19.5	%	%	%
9. Plastic #1 - PET	11.0			
10. Plastic #2 - HDPE	10.5			
11. Plastic #3 - PVC	0.1			
12. Plastic #5 - PP	6.5			
13. Plastic - Bags & Stretch Film wet & heavy	33.8	%	%	%
14. Plastic - Other	20.9			
15. Organics - Yard Waste	6.1		50 %	
16. Organics - Food Waste	10.9	%	%	%
17. Organics - Other	18.4			
18. Textiles	2.5.6			
19. Ferrous Metal - Cans	3.1	%	%	%
20. Ferrous Metal - Other	3.8			
21. Non-Ferrous Metal - UBC (Cans)	5.4	%	%	%
22. Non-Ferrous Metal - Other	2.9	%	%	%
23. Glass	8.5	%	50 % %	%
24. Inorganic Material	1.0			
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)	0.5			
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	0.1			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Garbage Truck leaves a (private) transfer station & transfer trailers

14

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 3 Date: 7/14/21 Time: 10:28 AM Person Recording:
HAULER INFORMATION:	Company Name: Truck #:
TYPE OF LOAD:	Residential: ☐ Industrial: ☐ Commercial: ☐ Mixed: ☒
ORIGINATION OF TRUCK:	Service Area: Otter Tail
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 32,600 Outgoing Truck Weight (#): Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[redacted] #	5.0 #	6.0 #	29.2 #
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	9.1			
3. Paper - Other (Magazines, Books, etc.)	0.1	60%		
4. Paper - Compostable (24.0)	33.0 + 26.8	%	%	%
5. Cardboard - Corrugated (OCC)	18.2			
6. Cardboard - Boxboard / Paperboard	15.0 +			
7. Cardboard - Cartons Gable Top & Aseptic	5.8			
8. Cardboard - Other	20.0	%	%	%
9. Plastic #1 - PET	13.0			
10. Plastic #2 - HDPE	10.1			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	6.5			
13. Plastic - Bags & Stretch Film	28.7 + 27.9			
14. Plastic - Other	26.3	40 %	%	30 %
15. Organics - Yard Waste				
16. Organics - Food Waste	12.1		10%	
17. Organics - Other	16.3	%	%	%
18. Textiles	26.0 + 18.1			
19. Ferrous Metal - Cans	3.6			
20. Ferrous Metal - Other	2.5	%	%	70 %
21. Non-Ferrous Metal - UBC (Cans)	3.5			
22. Non-Ferrous Metal - Other	2.7	%	%	%
23. Glass	6.4	%	%	%
24. Inorganic Material	1.8 (10.8)	%	90 %	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)	(2.5) (0.6)			
27. Electronics - Small Appliances (1.3)	(1.4) Sewing Machine			
28. Household Hazardous Waste - General	1.4			
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury	(1.7)	%	%	%

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 23 Date: 7/24/23 Time: 12:30 AM Person Recording: Jody
HAULER INFORMATION:	Company Name: Stericycle Truck #: 6 - Roll off
TYPE OF LOAD:	Residential: ☐ Industrial: ☐ Commercial: ☐ Mixed: ☒
ORIGINATION OF TRUCK:	Service Area: Otterstail
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 32,240 Outgoing Truck Weight (#): Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[redacted]	3.3 #	6.7 #	#
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	6.1			
3. Paper - Other (Magazines, Books, etc.)	—	98 %		
4. Paper - Compostable	41.8	%	%	%
5. Cardboard - Corrugated (OCC)	(0.1 + 25.2) + 4.02			
6. Cardboard - Boxboard / Paperboard	8.9			
7. Cardboard - Cartons Gable Top & Aseptic	6.3			
8. Cardboard - Other	—	16.2 %	%	%
9. Plastic #1 - PET	14.0			
10. Plastic #2 - HDPE	1.5.2			
11. Plastic #3 - PVC	—			
12. Plastic #5 - PP	8.6			
13. Plastic - Bags & Stretch Film	27.9			
14. Plastic - Other	(24.2) + 12.4	2 %	%	%
15. Organics - Yard Waste	—			
16. Organics - Food Waste 22.6	(23.8 + 12.8)		100 %	
17. Organics - Other	10.5	%	%	%
18. Textiles	(6.0)			
19. Ferrous Metal - Cans	3.3			
20. Ferrous Metal - Other	—	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	2.5			
22. Non-Ferrous Metal - Other		%	%	%
23. Glass	1.5	%	%	%
24. Inorganic Material	9.8	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 3.3		Date: 7/26/23	
	Time: 11:03 A.M.		Person Recording:	
HAULER INFORMATION:	Company Name:		Truck #:	
TYPE OF LOAD:	Residential: ☐	Industrial: ☐	Commercial: ☐	Mixed: ☒
ORIGINATION OF TRUCK:	Service Area: Butler Co.			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 31,280			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		4.7 #	8.6 #	#
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	6.6			
3. Paper - Other (Magazines, Books, etc.)	5.9	80%		
4. Paper - Compostable	40.6	%	%	%
5. Cardboard - Corrugated (OCC)	17.5			
6. Cardboard - Boxboard / Paperboard	10.6			
7. Cardboard - Cartons Gable Top & Aseptic	5.8			
8. Cardboard - Other	20.6	%	%	%
9. Plastic #1 - PET	12.0			
10. Plastic #2 - HDPE	10.3			
11. Plastic #3 - PVC	—			
12. Plastic #5 - PP	7.4			
13. Plastic - Bags & Stretch Film	32.5			
14. Plastic - Other	15.2	20% %	%	%
15. Organics - Yard Waste	8.7			
16. Organics - Food Waste 27.4+	(32.2) 23.0		100%	
17. Organics - Other	28.1	%	%	%
18. Textiles	12.8			
19. Ferrous Metal - Cans	3.1			
20. Ferrous Metal - Other		%	%	%
21. Non-Ferrous Metal - UBC (Cans)	4.3			
22. Non-Ferrous Metal - Other	2.9	%	%	%
23. Glass	11.7	%	%	%
24. Inorganic Material	27.7	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

42.6
8.4
35.2

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: [illegible] Date: 1/26/24 Time: [illegible] Person Receiving: [illegible]
HAULER INFORMATION:	Company Name: [illegible] Truck #: [illegible]
TYPE OF LOAD:	Residential: [ ] Industrial: [ ] Commercial: [ ] Mixed: [illegible]
ORIGINATION OF TRUCK:	Service Area: Bethel Co.
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 37,490
	Outgoing Truck Weight (#):
	Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		4.1 #	7.6 #	4.6 #
1. Paper - Newsprint (ONP)	(0.2)			
2. Paper - Mixed Office (SOP)	7.0			
3. Paper - Other (Magazines, Books, etc.)	(0.4)	95%		
4. Paper - Compostable	21.2 + 48.6	%	%	%
5. Cardboard - Corrugated (OCC) 24.0	20.9			
6. Cardboard - Boxboard / Paperboard	9.5			
7. Cardboard - Cartons Gable Top & Aseptic	5.6			
8. Cardboard - Other	17.5	%	%	%
9. Plastic #1 - PET	11.5			
10. Plastic #2 - HDPE	9.7			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	6.9			
13. Plastic - Bags & Stretch Film	29.4			
14. Plastic - Other	15.8 + 16.1	%	%	9.5 %
15. Organics - Yard Waste	(15.2)			
16. Organics - Food Waste	21.6 + 7.6		100%	
17. Organics - Other	22.1	%	%	%
18. Textiles	14.9 + (12.0)			
19. Ferrous Metal - Cans	3.4			
20. Ferrous Metal - Other	3.0	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.2			
22. Non-Ferrous Metal - Other	4.2	%	%	5 %
23. Glass	17.7	%	%	%
24. Inorganic Material	9.5	5% %	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)	(0.1)			
27. Electronics - Small Appliances	3.2			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	(0.1)			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury	(0.1)			

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 35 Time: 11:07 AM	Date: 7/26/23 Person Recording: Jake		
HAULER INFORMATION:	Company Name: [illegible] Co.	Truck #: 31		
TYPE OF LOAD:	Residential: [ ] Industrial: [ ]	Commercial: [ ]	Mixed: [X]	
ORIGINATION OF TRUCK:	Service Area: [illegible] Co. Clay			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 79,680			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[redacted]	6.4 #	8.3 #	#
1. Paper - Newsprint (ONP)	0.2	6		
2. Paper - Mixed Office (SOP)	9.2			
3. Paper - Other (Magazines, Books, etc.)	11.4	80%		
4. Paper - Compostable	39.3	%	%	%
5. Cardboard - Corrugated (OCC)	1.6.0			
6. Cardboard - Boxboard / Paperboard	9.8			
7. Cardboard - Cartons Gable Top & Aseptic	6.1			
8. Cardboard - Other	22.3	%	%	%
9. Plastic #1 - PET	10.6			
10. Plastic #2 - HDPE	10.5			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	9.7			
13. Plastic - Bags & Stretch Film	30.9			
14. Plastic - Other 0.5	(4.5) + 17.3	20% %	%	%
15. Organics - Yard Waste	(11.2) + 6.1			
16. Organics - Food Waste	22.8 + 15.8		100%	
17. Organics - Other	24.4	%	%	%
18. Textiles	23.7			
19. Ferrous Metal - Cans	10.9			
20. Ferrous Metal - Other	3.6	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	3.7			
22. Non-Ferrous Metal - Other	3.0	%	%	%
23. Glass	11.4	%	%	%
24. Inorganic Material 2.6	(17.0) + 10.8	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances	0.2			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	0.2			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury	0.1	%	%	%

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 36		Date: 7/26/23	
	Time: 10:26		Person Recording: [illegible]	
HAULER INFORMATION:	Company Name: [illegible] Co.		Truck #: [illegible]	
TYPE OF LOAD:	Residential: ☐	Industrial: ☐	Commercial: ☐	Mixed: ☒
ORIGINATION OF TRUCK:	Service Area: Clay Co.			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 79,380			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[redacted]	6.6 #	9.6 #	#
1. Paper - Newsprint (ONP)	6.5			
2. Paper - Mixed Office (SOP)	13.5			
3. Paper - Other (Magazines, Books, etc.)	0.9	80%		
4. Paper - Compostable	42.1	%	%	%
5. Cardboard - Corrugated (OCC)	16.0			
6. Cardboard - Boxboard / Paperboard	11.8			
7. Cardboard - Cartons Gable Top & Aseptic	7.3			
8. Cardboard - Other	19.5	%	%	%
9. Plastic #1 - PET	11.9			
10. Plastic #2 - HDPE	18.1			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	6.9			
13. Plastic - Bags & Stretch Film	30.7			
14. Plastic - Other	20.2 + 14.1	20% %	%	%
15. Organics - Yard Waste	7.9			
16. Organics - Food Waste 21.8 + 7.2	(13.5) + 15.6		90%	
17. Organics - Other	27.6	%	%	%
18. Textiles	25.3			
19. Ferrous Metal - Cans	3.4			
20. Ferrous Metal - Other	9.2	%	%	%
21. Non-Ferrous Metal - UBC (Cans)	4.0 + 3.2			
22. Non-Ferrous Metal - Other	4.9	%	%	%
23. Glass	14.0	%	%	%
24. Inorganic Material	(6.2)	%	10% %	%
25. Electronics - Regulated (Video Screens)	(0.1)			
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	(0.5)			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 37		Date: 7/27/23	
	Time: 9:31		Person Recording:	
HAULER INFORMATION:	Company Name: Clay Co		Truck #: 32	
TYPE OF LOAD:	Residential: ☐	Industrial: ☐	Commercial: ☐	Mixed: ☑
ORIGINATION OF TRUCK:	Service Area: Clay Co			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 80,260			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[redacted]	4.8 #	7.3 #	#
1. Paper - Newsprint (ONP)	—			
2. Paper - Mixed Office (SOP)	9.3			
3. Paper - Other (Magazines, Books, etc.)	7.1	90%		
4. Paper - Compostable	48.3	%	%	%
5. Cardboard - Corrugated (OCC)	20.6			
6. Cardboard - Boxboard / Paperboard	12.1			
7. Cardboard - Cartons Gable Top & Aseptic	6.3			
8. Cardboard - Other	21.0	%	%	%
9. Plastic #1 - PET	13.3			
10. Plastic #2 - HDPE	12.7			
11. Plastic #3 - PVC	0.1			
12. Plastic #5 - PP	7.3			
13. Plastic - Bags & Stretch Film	34.8			
14. Plastic - Other	25.5	10% %	%	%
15. Organics - Yard Waste	20.4			
16. Organics - Food Waste 9.6	22.9+13.4		100%	
17. Organics - Other	18.4	%	%	%
18. Textiles	28.4			
19. ~~Ferrous Metal~~ - Cans	5.0			
20. ~~Ferrous Metal~~ - Other	2.8	%	%	%
21. ~~Non-Ferrous Metal - UBC~~ (Cans)	3.7			
22. ~~Non-Ferrous Metal -~~ Other	3.1	%	%	%
23. ~~Glass~~	8.7	%	%	%
24. Inorganic Material	27.7	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances	3.3			
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury	3.0 Ballasts	%	%	%

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 38 Time: 12:18	Date: 11/27/23 Person Recording: Jeff		
HAULER INFORMATION:	Company Name: Atlas	Truck #: Roll-Off		
TYPE OF LOAD:	Residential: ☐ Industrial: ☐	Commercial: ☐	Mixed: ☑	
ORIGINATION OF TRUCK:	Service Area: Buckeye			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 37040			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		5.2 #	7.9 #	#
1. Paper - Newsprint (ONP)				
2. Paper - Mixed Office (SOP)	7.9			
3. Paper - Other (Magazines, Books, etc.)	6.5	60%		
4. Paper - Compostable	32.6	%	%	%
5. Cardboard - Corrugated (OCC)	18.1			
6. Cardboard - Boxboard / Paperboard	11.5			
7. Cardboard - Cartons Gable Top & Aseptic	5.9			
8. Cardboard - Other	16.8	%	%	%
9. Plastic #1 - PET	13.4			
10. Plastic #2 - HDPE	10.5			
11. Plastic #3 - PVC	4.1			
12. Plastic #5 - PP	8.1			
13. Plastic - Bags & Stretch Film	40.8			
14. Plastic - Other	18.4	40% %	%	%
15. Organics - Yard Waste	10.5			
16. Organics - Food Waste	19.5-10.3			
17. Organics - Other	57.2	%	%	%
18. Textiles	21.3			
19. Ferrous Metal - Cans	4.1			
20. Ferrous Metal - Other	3.2	%	%	%
21. Non-Ferrous Metal - UBC (Cans) 3.5	4.0 2.1			
22. Non-Ferrous Metal - Other	2.1	%	%	%
23. Glass	9.6	%	%	%
24. Inorganic Material	29.5	%	100 %	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)		%	%	%
32. Solid Wastes Containing Mercury				

C

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: 1 Time: 1:30	Date: 1/31/23 Person Recording:		
HAULER INFORMATION:	Company Name: Stevens	Truck #: 1		
TYPE OF LOAD:	Residential: ☐ Industrial: ☐	Commercial: ☐		
ORIGINATION OF TRUCK:	Service Area: Otterlail			
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 13760			
	Outgoing Truck Weight (#):			
	Weight of MSW (#):			
WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
	[redacted]	4.7 #	6.6 #	#
1. Paper - Newsprint (ONP)	0.5			
2. Paper - Mixed Office (SOP)	6.8			
3. Paper - Other (Magazines, Books, etc.)	13.0	60%		
4. Paper - Compostable	49.2	%	%	%
5. Cardboard - Corrugated (OCC) (16.2)	20.5			
6. Cardboard - Boxboard / Paperboard	9.4			
7. Cardboard - Cartons Gable Top & Aseptic	5.8			
8. Cardboard - Other	19.2	%	%	%
9. Plastic #1 - PET	12.5			
10. Plastic #2 - HDPE	9.5			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	6.2			
13. Plastic - Bags & Stretch Film	31.0			
14. Plastic - Other	20.2	40% %	%	%
15. Organics - Yard Waste	7.0			
16. Organics - Food Waste	23.9/12.2		100%	
17. Organics - Other (24.0)	28.2	%	%	%
18. Textiles	34.3			
19. Ferrous Metal - Cans	7.4			
20. Ferrous Metal - Other		%	%	%
21. Non-Ferrous Metal - UBC (Cans)	4.0			
22. Non-Ferrous Metal - Other	2.6	%	%	%
23. Glass	12.9	%	%	%
24. Inorganic Material	9.2	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries				
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury		%	%	%

C

Load Information Form - Fractions

GENERAL INFORMATION:	Sample #: [illegible] Date: 7/27/23 Time: 12:31 Person Recording:
HAULER INFORMATION:	Company Name: [illegible] Truck #: [illegible]
TYPE OF LOAD:	Residential: ☐ Industrial: ☐ Commercial: ☐ Mixed: ☑
ORIGINATION OF TRUCK:	Service Area: Waterford
MSW LOAD WEIGHT:	Incoming Truck Weight (#): 52,200
	Outgoing Truck Weight (#):
	Weight of MSW (#):

WASTE COMP. INFORMATION:	GROSS WEIGHT Fractions	GROSS WEIGHT Top Fines	GROSS WEIGHT Bottom Fines	Non-Separable
		6.8 #	10.2 #	#
1. Paper - Newsprint (ONP)	0.3			
2. Paper - Mixed Office (SOP)	6.6			
3. Paper - Other (Magazines, Books, etc.)	6.0	70%		
4. Paper - Compostable	61.4	%	%	%
5. Cardboard - Corrugated (OCC)	17.4			
6. Cardboard - Boxboard / Paperboard	10.2			
7. Cardboard - Cartons Gable Top & Aseptic	6.3			
8. Cardboard - Other	34.3	%	%	%
9. Plastic #1 - PET	13.4			
10. Plastic #2 - HDPE	10.7			
11. Plastic #3 - PVC				
12. Plastic #5 - PP	9.0			
13. Plastic - Bags & Stretch Film	38.7			
14. Plastic - Other	22.4	30% %	%	%
15. Organics - Yard Waste	12.2			
7.0 16. Organics - Food Waste 11.2 + 12.1	15.6 + 19.8		100%	
17. Organics - Other	21.4	%	%	%
18. Textiles	12.1			
19. Ferrous Metal - Cans	4.4			
20. Ferrous Metal - Other	10.1	%	%	%
21. Non-Ferrous Metal - UBC (Cans) 2.6	5.5 + 3.6			
22. Non-Ferrous Metal - Other	4.4	%	%	%
23. Glass	8.9	%	%	%
24. Inorganic Material	11.4	%	%	%
25. Electronics - Regulated (Video Screens)				
26. Electronics - Non-Reg (Circuit Boards)				
27. Electronics - Small Appliances				
28. Household Hazardous Waste - General				
29. Household Hazardous Waste - Batteries	0.1			
30. Problem Wastes (Car Seats, etc.)				
31. Special Wastes (Tires, etc.)				
32. Solid Wastes Containing Mercury	0.1	%	%	%

Appendix I. Mercury Waste Separation Plan*

*Also included in the Tempo central file as a .pdf document

Introduction

Scope and Authority
In accordance with Minnesota Rules Chapter 7011.1255, the Perham Resource Recovery Facility (hereinafter "Facility") hereby submits this Mercury Separation Plan (hereinafter "Plan"). This Plan has been prepared in accordance with the requirements of Minnesota Rules Chapters 7011.1255, Subp 2. These excerpts from the Minnesota Rules are reproduced in Appendix A. This Plan sets forth procedures the Facility shall employ to assure compliance with the aforementioned Minnesota Rule excerpts.

Facility Location & Description
The Perham Resource Recovery Facility (hereinafter "Facility") is owned by the City of Perham and is located at 201 South 6th Street, Perham, MN 56573 within Otter Tail County. The Facility operates two waste to energy combustors engineered, designed and built by Barlow Projects Inc. The Facility is operated by Barlow Projects, Inc. Each unit currently permitted at 58 tons/day for a total processing capacity of approximately 116 tons/day. The combustor combustion gases from each unit are combined and directed through a boiler and economizer generating steam. Exit gases are directed through a scrubber where activated carbon and lime are injected for controlling metals, dioxins and acid gases. Gases are then vented through a baghouse and vented to atmosphere.

Perham Resource Recovery Facility
Mercury Waste Separation Plan

Background
The Perham Resource Recovery Facility in Ottertail County has contracts to process waste from several counties. They are Ottertail, Todd, Wadena and tri County Solid Waste. Each of these counties has to some degree a "Mercury Separation Plan" in effect for their county. See the following attachments, Ottertail co. Attachment B, Todd Co. Attachment C, Wadena Co. Attachment D and Stearns Co. Attachment E. We rely primarily on the counties as the first source of separation. Through their education and disposal practices, and the changes in manufacturing a large portion of the mercury is being removed from the waste stream. We incorporate their plans into ours to make up the complete plan.

The greatest percentage of our waste comes from Ottertail County, which has an excellent program already in place.

Our Plan
We have investigated the plans of each county that delivers waste to the facility. We require that each county follow their plan in an effort to reduce mercury in the waste. Mercury reduction must begin at the source, as it is very difficult to remove once it has been mixed into the waste stream.

Copies of each of the county plans are included in this plan. In addition to the county plans, we inspect loads at random at the facility, to remove unexcitable waste from the waste stream including waste that could include mercury.
This facility has also installed "state of the art" pollution control equipment that reduces mercury emissions to a very low rate, far below the limit set forth by the Minnesota waste combustor rule.

The Plan

A. Mark Larson Plant Manager

B. (See Ottertail Co. plan Appendix B)

C. Inspect loads at random at the facility, to remove unexcitable waste from the waste stream including waste that could include mercury. The mercury that is removed at this facility is disposed of through the "Ottertail County Regional Household Hazardous Waste Facility" in Fergus Falls, Minnesota.

D. With the "Mercury fever thermometers exchange programs" in the counties and the reduction of mercury in manufacturing, it is extremely hard to estimate the number of pounds that will be removed. The facility will do all it can to remove mercury containing waste that comes into the facility through the inspection program and will continue to encourage the counties to follow their plans.

E. For the description of the methods to be used please refer to Appendix B, "Education" section

See Attachments

Attachment A

7011.1255 PLAN TO SEPARATE SOLID WASTES WHICH CONTAIN MERCURY.

Subpart 1. Preparation of a mercury waste separation plan. If a mercury waste separation plan is required by part 7007.0501 or 7011.1210, the waste combustor owner or operator must prepare a plan to identify, separate, and collect before combustion solid wastes which contain mercury.

Subp. 2. Contents of plan. The plan shall, at a minimum, include the collection of household batteries, electrical devices and switches, electric lighting components, and solid wastes from laboratories where mercury is used, and shall include a plan to identify, separate, and collect before combustion other significant sources of mercury.

The plan shall also contain:

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

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

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

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

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

Attachment B

Mercury Reduction Plan

City of Fergus Falls and Surrounding Region

BACKGROUND

What is Mercury?
Mercury (Hg) is a common element found naturally in a free state or mixed in ores. It may also be in rocks and released during a volcanic eruption or activity.

Hg is very dense, expands and contracts evenly with temperature change and has high electrical conductivity. That is why mercury is used in so many applications. Many of devices containing mercury may enter the waste stream, as people may not be aware that mercury is a threat to the environment.

Why be Concerned?
There are some health concerns and hazards associated with mercury. It can be absorbed through the lungs, mouth or skin as well as from eating mercury contaminated fish.
Mercury affects the brain, spinal cord, kidneys and liver; the nervous system and one's ability to feel, taste and move.

A portion of the solid waste from this region is disposed of at waste to energy facilities, where mercury testing is conducted on a regular basis. Tests have shown that mercury is being released into the environment through emissions. Even though air emission limits and standards have not been firmly established, steps to reduce mercury emissions are necessary. Therefore, a mercury reduction plan should be developed and implemented by each individual county if an effort to reduce mercury emissions.

Purpose of a Mercury Reduction Plan
Education and information will be major components of the mercury reduction plan. Residents and business owners and managers need to be informed of sources of mercury and alternatives to mercury. Residents may not be aware they are throwing mercury-containing devices into the waste stream, which can contribute to mercury releases into the environment.

INVESTIGATION
In an effort to reduce mercury in the waste stream and ultimately reduce mercury emissions, sources of mercury in our community must be identified. This may be an educational process for business owners, managers and employees as they may not be aware of the applications where mercury is used.

Health Care
Health Care organizations including hospitals, nursing homes, clinics, home health care agencies and dental clinics use devices containing mercury. Refer to Appendix A for examples of equipment used in healthcare.

By meeting with safety and environmental managers within health care organizations, we can work together to determine alternatives to mercury and how to manage instruments that contain mercury. The City of Fergus Falls and Otter Tail County have already conducted a survey of the health care facilities in Fergus Falls with support from Otter Tail Power Company. The survey was used to build awareness of mercury and its uses. Staff will follow up with those

organizations that had specific questions as well as those who identified using instruments containing mercury. Education and information will also be made available for staff training focusing on mercury and mercury spills.

Retail
In its early efforts, the City of Fergus Falls, Otter Tail County and Otter Tail Power Company identified that retailers may not be managing mercury properly. Many department stores, jewelry stores and hearing aid service centers change batteries for their customers, therefore, they may not know the proper management of batteries that contain mercury and other heavy metals.

A recent survey was conducted to identify retailers that change batteries, sell mercury fever and basal thermometers; candy, deep fry and oven thermometers; indoor/outdoor thermometers containing mercury; and small appliances with mercury switches. The questionnaire also included a question focusing on the management of fluorescent light tubes.

Staff learned from small businesses that there is need for fluorescent light tube management. Overall, more education will be presented to retailers through mailings and personal contact to be assured they are aware of mercury, its uses and its proper disposal as well as alternatives to mercury.

Contractors
Electrical, heating and cooling, construction contractors and appliance repair contractors service switches, thermostats, lighting, furnaces and boilers, manometers and appliances that may have mercury switches.
In an effort to learn the level of awareness contractors have for mercury, a survey was prepared and sent to contractors. The return rate from the contractors was lower than other types of businesses who were surveyed. Staff learned that contractors need to be more informed of sources of mercury.

A presentation is planned for electrical contractors workshop that is sponsored by Otter Tail Power Company. The presentation will introduce mercury, its sources and proper management and disposal options. Other types of contractors will be informed and educated of mercury through mailings and personal contact.

Auto and Small Engine Service Centers
This group of businesses like many businesses needs to be educated on mercury and the management of mercury and other hazardous materials. Auto and small engine centers may replace hood and trunk lights as well as some types of tilt switches, all of which may contain mercury within the switch. Because of lack of awareness, the survey showed that some service centers do not manage switches properly. Thus, more education and awareness is needed among auto and small engine service centers. Personal visits and mailings will be used to inform and educate.

EDUCATION
After evaluating the results of surveys of service garages, health care organizations, dental clinics, retailers, contractors, schools and daycare providers, the City of Fergus Falls, Otter Tail County and Otter Tail Power Company determined residents are not aware of sources of mercury and the proper management and disposal of devices containing mercury.

The educational process will begin with educating Fergus Falls City employees and Otter Tail County employees at staff meetings and safety seminars. It is important that employees of the City and County set an example of proper management of mercury as well as recognize the sources of mercury. As employees learn, they can share their knowledge with their families and friends.

A media campaign on mercury awareness and management will be initiated in Fergus Falls. We are fortunate to have a good relationship with both the local newspaper and radio station in Fergus Falls. Information for guest columns in the

newspaper will be· prepared and submitted to the newspaper while staff participates in radio information programs and public service announcements. Many organizations and businesses have newsletters for employees, which can be used as an educational tool, also.

Arrangements will be made to include information in utility bills so those residents may become more aware of mercury. Presentations will be made at community service organization meetings such as Rotary, Kiwanis, Lions Club, church groups, daycare association, etc. Staff will also make presentations for students and teachers at the elementary school, middle school and high school.

If all of the above audiences are reached, it is likely that people will hear the mercury message more than one time and will take steps to manage their fluorescent light tubes, fever thermometers and other devices containing mercury properly.

Mercury Disposal
Otter Tail County Solid Waste Department's Regional household hazardous waste program will accept mercury fever and basal thermometers, switches and thermostats from residents of Otter Tail, Grant, Stevens, Traverse and Wilkin County. Business having mercury to dispose of need to make arrangements with Otter Tail County Regional Household Hazardous Waste or with a private contractor for disposal. Hazardous waste from households is accepted free of charge while businesses are charged for hazardous waste by the pound. Businesses must be a minimal generator defined by rules established by the Minnesota Pollution Control Agency. Otter Tail County is licensed by the Minnesota Pollution Control Agency to accept hazardous waste
from Very Small Quantity Generators (VSQG), however, the County does not exercise its permit to do so.

Managing Waste from Joint Powers Counties
Contracts for waste disposal at the Fergus Falls City Waste to Energy Incinerator are currently being negotiated with the Joint Powers Counties (includes Otter Tail, Grant, Stevens, Todd. Wadena and Wilkin Counties). The new contracts will require each county to have a mercury reduction plan in place and practiced.

Because solid waste haulers contract with individual counties, each county will be required to inform their haulers of sources of mercury and proper management of devices containing mercury in effort to reduce mercury in the waste stream.

City of Fergus Falls Ordinance
The City of Fergus Falls passed an ordinance Dec. 4, 2000, effective Dec. 31, 2000 banning the sale of mercury fever thermometers. This ordinance was passed with unanimous support from the Fergus Falls City Council. The purpose of the ordinance is to eliminate the sale of mercury fever thermometers at retail outlets in the City of Fergus Falls. The local hospital has discontinued their program of sending mercury fever thermometers home with families of newborn children. The Council agreed if mercury fever thermometers are not available, consumers will purchase an alternative thermometer.

Health Care Without Harm is a collaborative campaign for environmentally responsible healthcare made up of more than 250 organization with a mission to transform the health care industry so it is no longer a source of environmental harm by eliminating pollution in health care practices without compromising safety or care. Officials with Health Care Without Harm say that fever thermometers are the largest single source of mercury discarded annually in municipal solid waste, estimated at 17 tons of mercury per year.

If retailers, hospitals and clinics do not offer mercury fever thermometers to consumers the number of mercury thermometers being used in households will be reduced.

Mercury Fever Thermometer Exchange
A mercury fever thermometer exchange and mercury collection was held at the Otter Tail County Regional Household Hazardous Waste collection facility in Fergus Falls on October 26, 2000. Approximately 240 households delivered 373 mercury thermometers with many households bring more than one thermometer. Each household was given a digital thermometer to replace their mercury fever thermometer. The Otter Tail County Solid Waste Department and the Minnesota Pollution Control Agency purchased the digital thermometers.

The exchange was promoted on local radio and newspapers. Posters were placed at the local clinic and businesses in Fergus Falls. The response to this exchange was very successful. The public became educated on mercury and the alternatives to mercury fever thermometers.

More mercury thermometer exchanges will be planned in 2001 and held in conjunction with household hazardous waste collections at the Otter Tail County Regional Facility in Fergus Falls as well as mobile collection held in cities in Otter Tail, Grant, Stevens, Traverse and Wilkin Counties. Thermometer exchanges will be encouraged to the remaining Joint Powers Counties of Wadena and Todd Counties. Otter Tail Power Company has dedicated monies to the purchase of digital fever thermometers to offer for exchange of mercury thermometers.

Household Hazardous Waste Collections
Household hazardous waste collections are held every Thursday from 9 a.m - 3 p.m. at the Otter Tail County Regional Household Hazardous Waste Facility in Fergus Falls and also the second Saturday, 9 a.m. - 3 p.m.; May - September. During the late spring, summer and fall, mobile collections are held in cities requesting collections. In 2000, collections were held in Underwood, Perham, Henning, Battle Lake, Vergas, Pelican Rapids and New York Mills. Collections were also held in the program's cooperating counties: Elbow Lake, Grant County; Morris and Chokio, Stevens County; Wheaton, Traverse County; Breckenridge and Wolverton, Wilkin County.

In 2000, 46 pounds of mercury was collected. Much of that mercury was collected at the mercury fever thermometer exchange and mercury collection. In 1999, the region collected 162 pounds of mercury. Stevens County alone collected 155 pounds due to a mercury clean-up project in the county.
With a greater awareness of mercury, it is anticipated that more mercury will be collected at future household hazardous waste collections. The mercury is disposed of through an approved hazardous waste contractor.

Batteries
Information on the different types of batteries used by consumers will be presented in local newspapers and on local radio as well as presentation at community meetings and at school classroom presentations. Residents are eager to know how to manage batteries.
The surveys that were conducted of service garages, health care organizations, dental clinics, retailers, contractors, schools and daycare providers identified that residents do not know how to manage spent batteries. This was obvious as some stated they throw them in the garbage while others store them because they don't know what to do with them. The public needs to learn to identify the different types of batteries and know the proper management of batteries.

Fluorescent Light Tube Management
Fluorescent light tubes are collected a three locations in Fergus Falls: Fergus Falls City Hall, Hingten Karst Electric and Light Returns Recycling. There are contractors who pick up spent tubes from many businesses in Fergus Falls and Otter Tail County.

In the year 2000, approximately 1500 spent fluorescent light tubes were collected and recycled from the residents of Fergus Falls at City Hall and at the Fergus Falls City Landfill.

More education will be presented to residents in the newspaper, on the radio and at public presentations on proper management of light tubes. Staff will promote the collection locations and encourage businesses to recycle their tubes. If solid waste collection employees should discover fluorescent light tubes among municipal solid waste, business owners will be notified of the state statute prohibiting fluorescent or high intensity discharge lamps in solid waste (l 15A.932; Subdivison 1 (c).) Solid waste collection staff will distribute lists of light tube recyclers when necessary.

Waste Composition Study
A waste composition study was conducted at the Fergus Falls Waste to Energy Facility in Fergus Falls in late December 2000. Waste was sorted by the following categories: paper, cardboard, plastic, ferrous, non-ferrous, glass, organic, inorganic, waste/mercury, top fines, bottom fines and non separated waste. The largest percentage of waste was paper at 27.2 % with waste/mercury at the lowest percentage of 0.1 %.

The City of Fergus Falls will establish a schedule of waste composition studies on a more frequent basis in an effort to monitor the waste being disposed of at the waste to energy facility. Studies such as this will also assist staff to direct educational efforts and concentrations.

MWSP APPENDIX A
The following list was identified in "HealthSystem Minnesota Mercury Reduction"; "MnT A.P Intern Project Report"; HealthSystem Minnesota; by Holly J. Barron, 2000

Anti-fouling agents
Anti-tamper devices on payphones
Barometers
Batteries-mercuric-oxide (in defibrillators, IV pumps, laryngoscopes, pagers, halter monitors, picker calibers, spirometer alarms, telemetry transmitters, temperature alarms, blood analyzers, cardiac monitors, oxygen analyzers/monitors, fetal monitors, ECG monitors, hearing aids, pacemakers)
Blood Gas Analyzer Reference Electrodes (Radiometer brand) 1
Bubblers/traps (mercury)
Cantor tubes
CAT Scan paper
Cathode-ray oscilloscopes 2
Coulter Counters with manometers
DC Watt Hour Meters 3
Diffusion pumps (mercury)
Distillation salts (mercury)
Dropping Mercury Electrode (DME) technique for polarography and voltammetry
Electron microscopes 4
Esophageal dilators (Maloney or Hurst bougie)
Feeding tubes (old weighted)
Float switches 5 (in bilge pumps, septic tanks, and sump pumps
Gastrointestinal tubes
G-sensor security systems use mercury in some applications

Lamps (fluorescent, cold/hot cathode germicidal, slimline germicidal, metal halide, high pressure sodium vapor, spectral, high-intensity discharge (HID), UV. Olympus Lifemeter lamp)
Lead Analyzer Electrodes 6 (ESA brand, Model 3010B)
Manometers for calibration 7

1 "Mercury Use in Hospitals and Clinics". Minnesota Office of Environmental Assistance. United States Environmental Agency Region 5.
2 "Mercury Use in Hospitals and Clinics". Minnesota Office of Environmental Assistance. United States Environmental Agency Region 5.
3 "Mercury Use in Hospitals and Clinics". Minnesota Office of Environmental Assistance. United States Environmental Agency Region 5.
4 "Mercury Use in Hospitals and Clinics". Minnesota Office of Environmental Assistance. United States Environmental Agency Region 5.
5 http://www.uml.edu/centers.LCSP/hospitals/HTMLSrc.IP_Mere_BMP.html.
6 "Mercury Use in Hospitals and Clinics". Minnesota Office of Environmental Assistance. United States Environmental Agency Region 5.

Miller Abbot tubes
Otoscopes (old) 8
pH meters 9
Pigmented plastics 10 (red bags and red blood tube caps)
Plunger/displacement relays 11 (in lighting, resistance heating, and power supply switching)
Products containing the preservatives: mercurochrome, merthiolate, mercurothiolate, merzonin, mertorgan, thimerosal, thimerosalateu 12.
Sequential Multiple Analyzers (SMAC) 13
Sphygmomanometers
Steam recorders in boiler panel
Telemetry instruments 14
Thermometers (patient care, air/water heating and cooling systems, water baths, lab ovens, refrigerators, freezers, incubators)
Thermostats
Thermostat probes 15 (in electric/gas stoves, hot water heaters, furnaces, clothes dryers, and space heaters)
Tilt switches 16 (airflow/fan limit control, building security systems, clothes irons, fire alarm boxes, fluid level/temperature/pressure control devices, laptop computer screen shutoff, silent light switches, space heaters)

7 http://www.uml.edu/centers/LCSP/hospitals/HTMLSre.IP_Mere_BMP.html.
8 Mercury in the Health Care Sector: The Cost of Alternative Products by MERC (Mercury Elimination and Reduction Challenge). November 1996.
9 http://www.uml.edu/centers/LCSP/hospitals/HTMLSre.IP_Mere_BMP.html.
10 Mercury in the Health Care Sector: The Cost of Alternative Products by MERC (Mercury Elimination and Reduction Challenge). November 1996.
11 http://www.uml.edu/centers/LCSP/hospitals/HTMLSre.IP_Mere_BMP.html.
12 Healthcare Industry Environmental Management Advisory Group January 26, 2000 Meeting Summary.
13 Mercury in the Health Care Sector: The Cost of Alternative Products by MERC (Mercury Elimination and Reduction Challenge). November 1996.
14 http://www.uml.edu/centers/LCSP/hospitals/HTMLSre.IP_Mere_BMP.html.

15 http://www.uml.edu/centers/LCSP/hospitals/HTMLSre.IP_Mere_BMP.html.
16 http://www.uml.edu/centers/LCSP/hospitals/HTMLSre.IP_Mere_BMP.html.

Attachment C

county residents and reduce the amount of household hazardous waste delivered to the County owned HHW facility.

Existing Program
The County Solid Waste Department manages and operates a permanent household hazardous waste facility located at the transfer station approximately 1 mile south of Browerville. The facility is open Monday through Friday 8:00am - 4:30pm and Saturdays 8:00 am - 12:00pm, May through September. HHW collection is by appointment only. The county uses the state contract for transportation and disposal of all HHW. Latex and oil based paint are recycled. The HHW Facility has a product exchange. which is available to residents when the facility is open. The County is part of the Tri-County North HHW Regional Facility (Stearns County). The County does contract with the Becker County Regional Facility once a year for a HHW event in Staples, which is located in both Wadena and Todd County.

During 1999, the County Household Hazardous Waste Facility received waste from 127 households which is 1.4% of the County's population.

Proposed Program
During 2001. The Todd County Solid Waste Department will contract with the Becker Regional Household Hazardous Waste Mobile Collection program for a once per year collection event to be held in June. The County anticipates conducting another June mobile collection event in 2002. The County anticipates no changes to this program throughout the planning period.

4.12 Demolition Debris Disposal
Policy and Goals
It is the policy of the Todd County Board of Commissioners to inform ·an residents that it is illegal to dispose of demolition debris in a manner not consistent with state rules and the County's Solid Waste Ordinance. It is the goal of the county to ensure that all residents have an opportunity to use the County owned demolition debris land disposal facility. The facility is located approximately 4 miles southeast of Browerville (see Appendix H)

Existing Program
The facility is not open to the public. Licensed demolition debris operators are the only individuals authorized to haul directly to the demo site. Residents are required to bring demolition debris to the transfer station where the material is sorted and placed into 20 and 30 yard containers for transport by county owned vehicle to the demolition debris land disposal site. A fee of $6.00, $5.00 per cubic yard and $1.00 for the transfer is charged to all residents and businesses. The MPCA Permit number for the Demolition Debris Disposal Facility is SW #402. Permit by rule disposal of demolition debris is the responsibility of the Minnesota Pollution Control Agency, however, all requests for demolition debris disposal are provided the Solid Waste Administrator for reference and file.

Proposed Program
Policy and Goals
It is the policy of the Todd County Board of Commissioners to ensure that all residents and businesses within the County understand that it is illegal to dispose of used oil and oil filters in a landfill or other waste disposal facility. The goal of the county is to ensure that all residents and businesses within the County know where and how to recycle used oil and oil filters.

Existing Program
The County Solid Waste Department encourages all vendors of oil and oil filters to provide recycling opportunities to customers and provides callers with a list of businesses that currently recycle oil and oil filters. Randr Oil collects waste oil and oil filters from area businesses, transports and processes this material for reuse.

Proposed Program
The County anticipates no significant changes to the existing Waste Oil and Waste Oil Filter Program. The County Solid Waste Department will put together a list of local businesses that accept waste oil and oil filters. This information will be made available to all residents and businesses.

Waste Battery Management
Policy and Goals
It is the policy of the Todd County Board of Commissioners to advise all residents that it is illegal to dispose of waste lead acid batteries in any manner not consistent with state statute and county ordinance. It is the goal of the County to provide an opportunity for residents and businesses to recycle lead acid batteries.

Existing Program
There is no charge for batteries. Batteries are accepted at the transfer station and kept in a plastic container with a cover. Interstate Batteries of Fargo, North Dakota collects, transports and processes all batteries.

Proposed Program
The County anticipates no significant changes to the Waste Battery Management Program throughout the planning period.

4.11 Household Hazardous Waste
Policy and Goals
It is the policy of the Todd County Board of Commissioners to continue to educate residents the proper disposal of household hazardous waste. It is the goal of the county to provide waste reduction education to all

Attachment D

MEMO
DATE: October 3, 2002

TO: Mark Larson, Operator - Perham Resource Recovery Facility
FROM: Deana M. Skov, Solid Waste Manager SUBJECT: Mercury Separation from the Waste Stream

As we did not have a mercury separation section in our Solid Waste Plan initially, Greg Malone, Wadena County Household Hazardous Waste Coordinator, and I have put together a simple plan of the things we presently do in order to extract and keep mercury out of the waste stream. A copy of this plan is attached.

I hope this satisfies your request. If the attached is not sufficient information, please contact me at your earliest convenience and we will do our best to get you the information you need.

Thank you for your patience.

Wadena County Mercury Collection Plan
Wadena County residents can dispose of their mercury or mercury containing devices at the Household Hazardous Waste Facility located at 12612 Hykas Street in Sebeka.

We collect fluorescent bulbs, ballast's, thermometers, switches, relays, neon lamps, mercury containing batteries. Collection days are the last Friday of the month from April through September. Charges are based on our waste hauler's fee's.

Lighting Unlimited Recycling of 5802 highway 89 NW Bemidji MN 56601 then transports Mercury wastes collected from the HHW Facility for disposal.

Wadena County is involved in Mercury educational programs through our HHW regional district. Promoting thermometer exchange' s, classroom programs on ground water pollution, and Health Fairs.

Wadena County Household Hazardous Waste Coordinator conducts hazardous waste identification meetings with the representative of the MSW transporter at the transfer station to minimize the possibility of mercury and other hazardous wastes from entering the waste stream.

Appendix J. 1996 MSW Combustor Ash Testing Variance

October 18, 1996

Mr. Robert Brooks
Perham Resource Recovery Facility 201 Sixth Avenue Northeast Perham, Minnesota 56573

RE: MSW Combustor Ash Testing Variance Perham Resource Recovery Facility, 116H-85-OT-l

Dear Mr. Brooks:

On August 9, 1996, the Minnesota Pollution Control Agency (MPCA) issued a public notice of its intent to modify several solid waste disposal facility and municipal ·solid waste (MSW) combustor permits to allow for a variance from Minn. R. 7035.2910 pertaining to the ash testing requirements for MSW combustors and Minn. R. 7035.2885, subp. 10A (1) pertaining to MSW combustor ash land disposal facilities. A summary of the specific rule citation and the MPCA's action is provided below.

The MPCA received one comment during the public notice pertaining to the MPCA's recommended action on the dioxin and furan testing requirement. The comment, in part, contended that since the MPCA was incorporating the one part per billion limit from the Statement of Need and Reasonableness (SONAR) for the MSW Combustor Ash Land Disposal Facility Rules, that it should be based total 2,3,7,8-TCDD Equivalents as stated in the SONAR. MPCA staff agree with this comment and have incorporated that change into the final variance language.

Minnesota Rule	MPCA Action
Minn. R. 7035.2910, subp. 3. Frequency. The owner or operator must collect samples at least quarterly..... Quarterly samples and an annual composite sample formed from equal portions of the quarterly samples must be analyzed according to subp 5.....	MPCA approves the variance deleting individual analysis of quarterly samples. Facilities shall continue to collect quarterly samples to form an annual composite sample for analysis.

Minn. R. 7035.2910, subp. 4. Test Methods. The owner or operator must test for total composition, leaching potential, and physical characteristics....	MPCA staff approves the variance for deleting testing for leaching potential using Environmental Protection Agency (EPA) Method 1311 for hazardous determination. However, after a change has occurred within the air pollution control equipment, the facility must recharacterize their ash using EPA Method 1311 in accordance with MPCA Hazardous Waste Division requirements. Leaching potential through EPA Method 1312 is also used to determine minimum liner design requirements. If all the requirements of Minn. R. 7035.2885, subp. 4B apply at a given facility, then it is not necessary to conduct any EPA Method 1112 testing and liner design will be based solely on actual leachate analysis. However, if all of the requirements of Minn. R: 7035.2885, subp. 4B cannot be met, the facility must perform four quarters of EPA Method 1312 testing during the year prior to anticipated liner construction. Rather than deleting the analysis for physical characteristics, MPCA staff approves a reduction in the frequency of testing from quarterly to annually.
Minn. R. 7035.2910, subp. 4 A. Total Composition (1) Table 1: Quarterly Testing Parameters, and (2) Table 2: Annual Testing Parameters	MPCA staff requires that the annual composite samples be analyzed for all parameters listed in Tables 1 and 2 of Minn.R. 7035.2910, subp. 4A
Minn. R. 7035.2910, subp. 4 A. Total Composition (3) Table 3: Special Annua1 Testing Parameters	MPCA staff approves the variance for discontinuing dioxin and-furan testing for those facilities which have historically shown a 2,3,7,8-TCDD Equivalents value of less than one part per billion. Discontinuation of dioxin and furan testing will also be allowed if a: facility undergoes process or operational changes which can be demonstrated to result 2,3,7,7-TCDD Equivalents value of less than one part per billion. For facilities which cannot demonstrate this, MPCA approves reducing the frequency of testing from annually to biannually

Minn. R. 7035.2910, subp. 5. Number of analyses. The owner or operator must collect and analyze fly ash and bottom ash samples separately according to item A. In cases where bottom ash and fly ash are mixed, collect and analyze samples according to item B, and fly ash samples according to item A. If ash treatment occurs prior to disposal, collect samples after treatment.	Minn. R. 7035.2910, subp. 5 A(2) or B(2) set forth the minimum requirements for the number and type of samples that must be analyzed annually. The MPCA does not approve the variance request for discontinuing the collection of separate fly ash samples at facilities that combine their ash for disposal.
Minn. R. 7035.2885, subp. 10 A (1) The owner or operator of a facility which disposes of bottom ash or combined ash must place intermittent cover frequently enough so that the bottom ash or combined ash is not left uncovered for more than 48 hours. The percent moisture of exposed ash must not be less than ten percent at any time....	MPCA staff approves the variance to discontinue moisture testing of the in-place ash at the land disposal facility.

With this letter, the MSW combustor ash testing variance is hereby approved for your facility as outlined above. If you have any questions, please contact Kathy Hanson of my staff at 612/296-8443,

Sincerely,
James L. Warner, P.E.
Division Manager
Ground Water and Solid Waste Division

JLW:jk

cc: Ann Jackson, MPCA Air Quality Division Chris Psihos, Psihos & Associates, lite.

Appendix K. 1997 Perham Resource Recovery Facility (PRRF) Variance

STATE OF MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of the Application from
Fergus Falls Municipal Waste-to-Energy Plant, City of Red Wing Municipal Refuse Incinerator, Olmsted-county-waste-to-Energy Plant, Perham Resource Recovery Facility, Polk County Municipal Resource Recovery Plant, and Pope-Douglas Solid Waste Combustion Facility for a Variance from various parts of the Waste Combustor Rule, Minn. R. 7011.1201 to 7011.1285 and its new amendments when promulgated.

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

After affording all interested parties an opportunity to submit written comments, to petition the Minnesota Pollution Control Agency (MPCA) to hold a public information meeting, and to petition the MPCA to hold a contested case hearing, after giving due consideration to the views expressed to the MPCA, and after reviewing the application submitted by Fergus Falls Municipal Solid Waste-to-Energy Plant located in Fergus Falls, City of Red Wing Municipal Refuse. Incinerator located in Red Wing, Olmsted County Waste-to-Energy Plant located in Rochester, Perham Resource Recovery Facility located in Perham, Polk County Municipal Resource Recovery Plant located in Fosston, and the Pope-Douglas Solid Waste Combustion Facility located in Alexandria, the MPCA hereby makes the following findings of Fact and Conclusions of Law:

FINDINGS OF FACT
1. All variance applicants (Affected Facilities) are operating Class C waste combustors as defined in Minn. R. 7011.1201, subp.11.

2. Minn. R. 7011.1201 to 7011.1285 (adopted on June 13, 1994) establish emission limits, monitoring and testing requirements, general facility operating requirements, waste management plans, operator certification, and record keeping and reporting requirements for Class C waste combustors. The Affected Facilities were required to comply with the entire rule as of June 20, 1997. Minn. R. 7011.1215, subp. 5.

3. The Environmental Protection Agency (EPA) promulgated a federal waste combustor rule on December 19, 1995, that included standards for Class C waste combustors. The federal standards and guidelines for Class C waste combustors were, for the most part, more restrictive than Minnesota's 1994 waste combustor rule.

4. Minnesota is required to amend its rule to make it at least as stringent as the federal rule. It was the MPCA's intention to amend its waste combustor rule before the compliance date and extend the existing Class C compliance deadline to give facilities sufficient time to achieve compliance with the new federal standards.

5. Approximately 45 waste combustors subject to the new EPA rule sued EPA over its authority to establish emission limits for waste combustor units in aggregate (facility-wide) rather than for individual combustion units. The District of Columbia Circuit agreed with the plaintiffs and vacated the new sources performance standards (NSPS) and emission guidelines for all new and existing facilities on December 6, 1996. See Davis County Solid Waste Management v. United States E.P.A., 101 F.3d 1395 (D.C. Cir. 1996).

6. EPA filed a petition for rehearing requesting that the court reconsider the remedy portion of its opinion and vacate the regulations only as they applied to small waste combustor units (Class C in Minnesota). On March 21, 1997, the court granted EPA's petition. See Davis County Solid Waste Management v. United States E.P.A., 108 F.3d 1454 (D.C.

Cir. 1997). Therefore, federal regulations for small waste combustor units were vacated by the operation of the court's order. EPA plans to promulgate small waste combustor unit standards and guidelines in 1998. Minnesota will amend its waste combustor rule after the EPA rule is promulgated.

7. The Affected Facilities, in anticipation of the new requirements that would supersede the requirements of the existing rule, did not take steps to come into compliance with state standards. The MPCA was aware of the Affected Facilities approach and agreed that it was reasonable to invest in compliance with the new standards. Because the federal regulations for small waste combustors were vacated, Minnesota did not amend its rule and extend the compliance date. Therefore, the Affected Facilities still have to comply with Minnesota's waste combustor rule by June 20, 1997. {The Affected Facilities are in compliance with the majority of Minnesota's waste combustor rule.)

8. On July 15, 1997, the Affected Facilities jointly applied for a variance from certain parts of Minnesota's waste combustor rule until MPCA amends the rule. The Affected Facilities take the position that:

* Their expectation that Minnesota's Rule would be amended prior to the original compliance date of June 20, 1997, was reasonable. The Affected Facilities have been "on notice" since December 1995 that Minnesota's Rule would be amended before June 20, 1997, to reflect more stringent EPA standards;

* it was appropriate to wait to complete retrofit plans and compliance plans pending adoption of the federal guidelines into Minnesota's Rule for Class C facilities; and

* not spending dollars prematurely will assure that already financially stressed integrated solid waste management systems throughout Minnesota will not incur additional debt without being assured that the changes being made will meet final standards.

9. The requested variance does not request an increase: in emission limits required by the Affected Facilities' air emission permits, does not change any air, soil, or water quality standard and will not have a significant environmental impact.

10. The variance is not permanent. The variance expires on the date when the MPCA adopts the new Class C emission guidelines into the state rule.

11. MPCA staff reviewed the application and the Commissioner has made a preliminary determination that the variance should be issued. Public notice of the variance application and the Commissioner's preliminary determination was published as follows:

Affected Facility	Newspaper	Publishing Date	Comment Period
Fergus Falls Municipal Solid Waste-to-Energy Plant	Fergus Falls Daily Journal	October 15, 1997	October 16 - November 14, 1997
City of Red Wing Municipal Refuse Incinerator	Red Wing Republican Eagle	October 15, 1997	October 16 - November 14, 1997

Olmsted County Waste-to-Energy Plant	Rochester Post-Bulletin	October 15, 1997	October 16 - November 14, 1997
Perham Resource Recovery Facility	Perham Enterprise-Bulletin	October 16, 1997	October 17 - November 17, 1997
Polk County Municipal Resource Recovery Plant	The Thirteen Towns	October 20, 1997	October 20 - November 19, 1997
Pope-Douglas Solid Waste Combustion Facility	Alexandria Echo-Press	October 15, 1997	October 16 - November 14, 1997

The public notice was made available at the main MPCA office in St. Paul and the MPCA regional offices in Brainerd, Detroit Lakes, Duluth, Marshall, and Rochester. The MPCA did not receive any comments on the proposed variance.

CONCLUSIONS OF LAW

1. The MPCA has jurisdiction over this matter under Minn. Stat. § 116.07, subd. 5.

2. The Commissioner of the MPCA has authority under Minn. Stat. § 116.03 to issue a variance from the rule and may in order to avoid undue hardship and to promote the effective and reasonable application and enforcement of laws, rules, and standards.

3. All requirements of Minn. Stat.§§ 116.03 and 116.07, subd. 5, and Minn. R. 7000.7000 have been met.

4. Granting the variance will avoid an undue financial burden and will promote the effective and reasonable application and enforcement of air quality rules and standards. The uncertainty surrounding the federal rule was beyond the control of any of the Affected Facilities or the MPCA. It is proper that the facilities spend their resources on compliance with the most stringent requirements that apply or will soon apply to them.

5. Any finding more appropriately considered a conclusion or any conclusion more appropriately considered a finding is hereby adopted as such.

6. ORDER

Based on the foregoing Findings of Fact and Conclusions of Law:

IT IS ORDERED that the MPCA hereby grants a variance to Affected Facilities from various parts of the waste combustor rule, Minn. R. 7011.120 I to 7011.1285 and 'its new amendments as delineated in the tables below, subject to the following conditions:

1. The Affected Facilities must comply with all conditions required by air emission permits (existing or future) issued to them and all amendments (existing and future) to those permits.

2. The Affected Facilities must comply with applicable Minnesota Statutes.

3. Unless otherwise provided in the tables below, this variance will expire on the date when the MPCA's amended state rule requires compliance with new emission guidelines promulgated by EPA for Class C sized municipal waste combustors.

Affected Facility: Perham Resource Recovery Facility

Rule Citation	Rule Requirement	Initial Testing Requirement
1. 7011.1277	Total Particulate Matter emission limit of 0.020 gr/dscf	0.08 gr/dscf until variance expires
2. 7011.1260, subp. 1	Install and operate a combustion chamber temperature monitor.	Relief from this requirement.
3. 7011.1240, subps. 3 & 4	Start up from a cold furnace using solid waste is prohibited; use of auxiliary fuel to maintain operating temperature after sold waste feed has ceased	Relief from this requirement until current rule amendments are final. In lieu of subpart 3, the facility shall use solid waste solely to provide thermal protection of the grate or hearth during the start-up period when solid waste is not being fed to the grate or hearth.
4. 7011.1270, item B(3)(b)	Mercury testing every 90 days	Mercury testing 90 days following the effective date of this variance, then in six month intervals thereafter until a permit is issued with a mercury emission limit or an amended rule provides otherwise.
5. 7011.1270, item B	PCDD/PCDF (dioxin) , testing	In lieu of this item, the facility shall: 1) install, operate, and maintain temperature monitors according to part 7011.1260, subpart 2 and 4, item A, 30 days from the effective date of this variance; 2) until PCDD/PCDF performance test results are submitted to the Commissioner, maintain inlet temperatures to the particulate ·matter control device below 470 degrees Fahrenheit, as measured by temperature monitors; 3) conduct annual performance tests for dioxin to demonstrate compliance with 500 ng/dscm corrected to 7% O2 will commence 270 days after· the effective date of this variance; and 4) optionally test for dioxins once every two years if the dioxin

			performance test demonstrates 350 ng/dscm or lower ("superior performance"), with this option terminating when new dioxin limits from federal standards are incorporated into state rules or when the results of a dioxin performance test demonstrates a value above 350 ng/dscm, which ever comes first.
6.	7011.1270 item A(2)	Annual stack testing for Particulate Matter and Opacity	If the particulate matter performance test demonstrates 0.04 gr/dscf or lower . ("superior performance") the facility may choose to stack test for particulate matter and opacity once every two years as long as the facility continues to operate its CEMs for opacity. Testing every two years shall terminate when this variance expires or when the results of a particulate· performance test demonstrates a value above 0.04 gr/dscf, which ever comes first.
7.	7011.1260, subp. 3(A)(l - 4)	Install and operate continuous emission monitors (CEMS) when burning solid waste for the following: CO, steam flow, flue gas opacity, and O2/CO2 to correct pollutant concentrations	New CEMs must be installed and begin operating by December 31, 1998. (The facility must continue to operate CEMS that are already in place.).
8.	7011.1260, subps. 5 & 6	CEM Uptime and Recordkeeping	New CEMs must meet these requirements by December 31, 1998. (The facility must continue to demonstrate compliance with these requirements as they apply to CEMS that are already in place.)

In addition to the above requirements, the following initial testing schedule shall apply.
Although this is not a variance from existing requirements (unless stated otherwise in the body of this variance), it is reasonable to allow initial testing requirements that transition from the existing waste combustor rule to this variance.

Pollutant	**Initial Testing Requirement**
Dioxin ,	All Affected Facilities, with the exception of Olmsted County, shall conduct a performance test not more than 270 days after the effective date of this variance. Olmsted County shall conduct a performance test not more than one year and 270 days after the effective date of this variance.

Mercury	All Affected Facilities shall conduct a performance test not more than 90 days after the effective date of this variance.
Particulate Matter	All Affected Facilities shall conduct a performance test not more than 90 days after the effective date of this variance.
Cadmium	All Affected Facilities shall conduct a performance test not more than 90 days after the effective date of this variance.
Lead	All Affected Facilities shall conduct a performance test not more than 90 days after the effective date of this variance.

IT IS SO ORDERED:

STATE OF
MINNESOTA POLLUTION CONTROL AGENCY

By Peder A. Larson, Commissioner

DATED this 22 day of Dec 1997