

**AIR EMISSION PERMIT NO. 16300025- 001**

**IS ISSUED TO**

**3M Company**

3M - Cottage Grove Corporate Incinerator  
10746 Innovation Drive  
Cottage Grove, Washington County, Minnesota 55016

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

Permit Type	Application Date
Total Facility Operating Permit	04/13/1995
Updated Title V Permit Application	12/23/2002

This permit authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. 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 as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

**Permit Type:** Federal; Pt 70/Major for NSR

**Issue Date:** February 14, 2005

**Expiration:** February 14, 2010

All Title I Conditions do not expire.

---

Richard J. Sandberg  
Air Quality Section Manager  
Industrial Division

for Sheryl A. Corrigan  
Commissioner  
Minnesota Pollution Control Agency

## **TABLE OF CONTENTS**

**Notice to the Permittee**

**Permit Shield**

**Facility Description**

**Table A: Limits and Other Requirements**

**Table B: Submittals**

**Appendices: Attached and Referenced in Table A**

**NOTICE TO THE PERMITTEE:**

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

**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.

## **FACILITY DESCRIPTION:**

The 3M Company (Permittee) Cottage Grove Center (Facility) is located at 10746 Innovation Road, Cottage Grove, Minnesota. 3M has operated the thermal treatment system under a combined air quality and hazardous waste permit. For purposes of simplifying the permit situation, this new permit is an air permit only. The facility also has a separate RCRA hazardous waste permit. The 3M Corporate Incinerator provides treatment and storage for business-related wastes generated by 3M's operating divisions throughout North America. The Incineration system is designed to handle a variety of wastes introduced through four separate feed systems. Materials can be fed to the rotary kiln by four means depending on the waste stream. Solids are fed through a bulk feed chute (pakfeeder and Komar shredder); pumpable liquids are fed through lances or the frontwall burner; sludge is fed through a lance from either the Building 145 sludge room or the Building 47 pump room; and direct burn wastes are fed through a lance. The system consists of a rotary kiln and a secondary combustion chamber (SCC) followed by a wet off-gas cleaning system. The off-gas cleaning system consists of a quench chamber, a subcooler, a particulate removal device known as the M1 module, a wet electrostatic precipitator (WESP), an induced draft fan, and an exhaust stack.

Hazardous waste is shipped to the Facility via semi-trailers in 55-gallon steel drums, totes, plastic and fiber drums, pails, boxes, bags, portable tanks, and tanker trucks. The types of containerized wastes received include solids, gases in cylinders, pumpable sludges, organic liquids, and aqueous liquids. Located at this Facility are indoor and outdoor container storage areas, outdoor tank storage areas, a containment building for bulk solids storage, a tanker truck unloading area, outdoor trailer storage, indoor and outdoor material handling areas, and a rotary kiln incinerator with a secondary combustion chamber. These units provide treatment and storage of hazardous waste generated by 3M's operating divisions. No disposal of hazardous waste is conducted at this Facility.

This permit authorizes the operation of the combustion system consisting of a rotary kiln and a secondary combustion chamber. The rotary kiln is 40 feet long, has a shell diameter of 14 feet 9 inches, and is designed as a primary combustion chamber. The secondary combustion chamber is 60 feet high and has a shell diameter of 20 feet. It provides additional residence time to combust off-gases of organic wastes. An emergency vent stack is provided at the roof of the secondary combustion chamber. The combustion system has no boiler. This permit does not authorize the installation of a future boiler.

Pollution control is facilitated with several flue gas treatment devices. The incinerator exhaust gases are saturated and cooled in the quench chamber. Flue gases then pass through a subcooling tower and filtering module. Final pollution control is provided by a wet electrostatic precipitator. Flue gases are pulled through the system with an induced draft fan and exhausted through a 165-foot stack to the atmosphere.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.**

Subject Item:	Total Facility
What to do	Why to do it
SOURCE-SPECIFIC REQUIREMENTS	hdr
The facility currently manages ozone-depleting substances as defined in 40 CFR pt. 82. Sections 601-618 of the 1990 Clean Air Act Amendments and 40 CFR pt. 82 may apply to your facility. Read Sections 601-618 and 40 CFR pt. 82 to determine all the requirements that apply to your facility.	40 CFR pt. 82
OPERATIONAL REQUIREMENTS	hdr
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
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
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 shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment 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 the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
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
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 EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
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)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A and/or B.	Minn. R. ch. 7017
Performance Test Notifications and Submittals:  Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.  Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test  The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
MONITORING REQUIREMENTS	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A and/or B, 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)
<b>RECORDKEEPING</b>	hdr
Recordkeeping: Retain all records at the stationary source for a period of 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)
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)
<b>REPORTING/SUBMITTALS</b>	hdr
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, notification shall be made to 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 Permittee shall inform the Commissioner of the cause of the shutdown and the estimated duration. The Permittee shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration 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 Permittee. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.  At the time of notification or as soon as possible thereafter, the Perittee shall inform the Commissioner of the cause of the breakdown and the estimated duration. The Permittee shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which 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
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.	Minn. R. 7007.1150 through Minn. R. 7007.1500
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).	Minn. R. 7007.1400, subp. 1(H)
Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Subject Item:** GP 001 Equipment Leaks Subject to Subpart V

**Associated Items:** EU 003 Waste Handling Via Sludge Pump

EU 012 Flanges, Piping and Valves-Kiln Burner Trains

What to do	Why to do it
Each Permittee subject to the provisions of subpart V shall demonstrate compliance with the requirements of 40 CFR 61.242-1 to 61.242-11 for each new and existing source as required in 40 CFR 61.05, except as provided in 40 CFR 61.243 and 61.244.	40 CFR 61.242-1(a)
Compliance with subpart V will be determined by review of records, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 61.245.	40 CFR 61.242-1(b)
The Permittee may request a determination of alternative means of emission limitation to the requirements of 40 CFR 61.242-2, 61.242-3, 61.242-5, 61.242-6, 61.242-7, 61.242-8, 61.242-9 and 61.242-11 as provided in 40 CFR 61.244.	40 CFR 61.242-1(c)(1)
If the Administrator makes a determination that a means of emission limitation is at least a permissible alternative to the requirements of 40 CFR 61.242-2, 61.242-3, 61.242-5, 61.242-6, 61.242-7, 61.242-8, 61.242-9 or 61.242-11, the Permittee shall comply with the requirements of that determination.	40 CFR 61.242-1(c)(2)
Each piece of equipment to which subpart V applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.	40 CFR 61.242-1(d)
Equipment that is in vacuum service is excluded from the requirements of 40 CFR 61.242-2, to 40 CFR 61.242-11 if it is identified as required in 40 CFR 61.246(e)(5).	40 CFR 61.242-1(e)
Standards: Pumps	40 CFR 61.242-2
Each pump shall be monitored monthly to detect leaks by the methods specified in 40 CFR 61.245(b), except as provided in 40 CFR 61.242-1(c) and 40 CFR 61.242-2(d), (e), (f) and (g).	40 CFR 61.242-2(a)(1)
Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.	40 CFR 61.242-2(a)(2)
If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If there are indications of liquids dripping from the pump seal, a leak is detected.	40 CFR 61.242-2(b)(1) and (2)
When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 61.242-10. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.	40 CFR 61.242-2(c)(1) and (2)
Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR 61.242-2(a) and (b), provided the requirements of 40 CFR 61.242-2(d)(1) to (6) (provided below) are met.	40 CFR 61.242-2(d)
Each dual mechanical seal system is: - Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or - Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 61.242-11; or - Equipped with a system that purges the barrier fluid into a process stream with zero VHAP emissions to atmosphere.	40 CFR 61.242-2(d)(1)
The barrier fluid is not in VHAP service and, if the pump is covered by standards under 40 CFR part 60, is not in VOC service.	40 CFR 61.242-2(d)(2)
Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.	40 CFR 61.242-2(d)(3)
Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. - If there are indications of liquid dripping from the pump seal at the time of the weekly inspection, the pump shall be monitored as specified in 40 CFR 61.245 to determine the presence of VOC and VHAP in the barrier fluid. - If the monitor reading (taking into account any background readings) indicates the presence of VHAP, a leak is detected. For the purpose of this paragraph, the monitor may be calibrated with VHAP, or may employ a gas chromatography column to limit the response of the monitor to VHAP, at the option of the Permittee. - If an instrument reading of 10,000 ppm or greater (total VOC) is measured, a leak is detected.	40 CFR 61.242-2(d)(4)
Each sensor as described in 40 CFR 61.242-2(d)(3) is checked daily or is equipped with an audible alarm.	40 CFR 61.242-2(d)(5)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>-The Permittee determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both.                  - If indications of liquids dripping from the pump seal exceed the criteria established in 40 CFR 61.242-2(d)(6)(i), or if, based on the criteria established in 40 CFR 61.242-2(d)(6)(i), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.                  - When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in 40 CFR 61.242-10.                  - A first attempt at repair shall be made no later than five calendar days after each leak is detected.</p>	<p>40 CFR 61.242-2(d)(6)</p>
<p>Any pump that is designated, as described in 40 CFR 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of 40 CFR 61.242-2(a), (c), and (d) if the pump:                  - Has no externally actuated shaft penetrating the pump housing,                  - Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 61.245(c), and                  - Is tested for compliance with 40 CFR 61.242-2(e)(2) initially upon designation, annually, and at other times requested by the Administrator.</p>	<p>40 CFR 61.242-2(e)(1) to (3)</p>
<p>If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a process or fuel gas system or to a control device that complies with the requirements of 40 CFR 61.242-11, it is exempt from the requirements of 40 CFR 61.242-2(a) through (e).</p>	<p>40 CFR 61.242-2(f)</p>
<p>Any pump that is designated, as described in 40 CFR 61.246(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of 40 CFR 61.242-2(a) and (d)(4) through (6) if:                  - The Permittee demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 61.242-2(a); and                  - The Permittee has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in 40 CFR 61.242-2(c) if a leak is detected.</p>	<p>40 CFR 61.242-2(g)(1) and (2)</p>
<p>Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of 40 CFR 61.242-2(a)(2) and (d)(4), and the daily requirements of 40 CFR 61.242-2(d)(5), provided that each pump is visually inspected as often as practicable and at least monthly.</p>	<p>40 CFR 61.242-2(h)</p>
<p>Standards: Pressure relief devices in gas/vapor service</p>	<p>40 CFR 61.242-4</p>
<p>Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 61.245(c).</p>	<p>40 CFR 61.242-4(a)</p>
<p>After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 61.242-10.                   No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 61.245(c).</p>	<p>40 CFR 61.242-4(b)(1) and (2)</p>
<p>Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in 40 CFR 61.242-11 is exempt from the requirements of 40 CFR 61.242-4(a) and (b).</p>	<p>40 CFR 61.242-4(c)</p>
<p>Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of 40 CFR 61.242-4(a) and (b), provided the Permittee complies with the requirements in 40 CFR 61.242-4(d)(2).                   After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 61.242-10.</p>	<p>40 CFR 61.242-4(d)(1) and (2)</p>
<p>Standards: Sampling Connecting Systems</p>	<p>40 CFR 61.242-5</p>
<p>Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed vent system, except as provided in 40 CFR 61.242-1(c). Gases displaced during filling of the sample container are not required to be collected or captured.</p>	<p>40 CFR 61.242-5(a)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Each closed-purge, closed-loop, or closed vent system as required in 40 CFR 61.242-5(a) shall comply with the requirements specified in 40 CFR 61.242-5(b)(1) through (4):</p> <p>Return the purged process fluid directly to the process line; or</p> <p>Collect and recycle the purged process fluid; or</p> <p>Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of 40 CFR 61.242-11; or</p> <p>Collect, store, and transport the purged process fluid to any of the following systems or facilities:          - A waste management unit as defined in 40 CFR 63.111 if the waste management unit is subject to and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams; or</p> <p>(continued below)</p>	<p>40 CFR 61.242-5(b)(1) to (4)</p>
<p>(continued)</p> <p>- A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or          - A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.</p>	<p>40 CFR 61.242-5(b)(1) to (4) (continued)</p>
<p>In-situ sampling systems and sampling systems without purges are exempt from the requirements of 40 CFR 61.242-5(a) and (b).</p>	<p>40 CFR 61.242-5(c)</p>
<p>Standards: Open-ended valves or lines</p>	<p>40 CFR 61.242-6</p>
<p>Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 61.242-1(c).</p> <p>The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.</p>	<p>40 CFR 61.242-6(a)(1) and (2)</p>
<p>Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.</p>	<p>40 CFR 61.242-6(b)</p>
<p>When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with 40 CFR 61.242-6(a) at all other times.</p>	<p>40 CFR 61.242-6(c)</p>
<p>Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of 40 CFR 61.242-6(a), (b) and (c).</p>	<p>40 CFR 61.242-6(d)</p>
<p>Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in 40 CFR 61.242-6(a) through (c) are exempt from the requirements of 40 CFR 61.242-6(a) through (c).</p>	<p>40 CFR 61.242-6(e)</p>
<p>Standards: Valves</p>	<p>40 CFR 61.242-7</p>
<p>Each valve shall be monitored monthly to detect leaks by the method specified in 40 CFR 61.245(b) and shall comply with 40 CFR 61.242-7(b)-(e), except as provided in 40 CFR 61.242-7(f), (g), and (h), 40 CFR 61.243-1 or 40 CFR 61.243-2, and 40 CFR 61.242-1(c).</p>	<p>40 CFR 61.242-7(a)</p>
<p>If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.</p>	<p>40 CFR 61.242-7(b)</p>
<p>Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.</p> <p>If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.</p>	<p>40 CFR 61.242-7(c)(1) and (2)</p>
<p>When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 61.242-10.</p> <p>A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.</p>	<p>40 CFR 61.242-7(d)(1) and (2)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>First attempts at repair include, but are not limited to, the following best practices where practicable:</p> <p>Tightening of bonnet bolts;</p> <p>Replacement of bonnet bolts;</p> <p>Tightening of packing gland nuts; and</p> <p>Injection of lubricant into lubricated packing.</p>	40 CFR 61.242-7(e)(1) through (4)
<p>Any valve that is designated, as described in 40 CFR 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of 40 CFR 61.242-7(a) if the valve:</p> <p>Has no external actuating mechanism in contact with the process fluid;</p> <p>Is operated with emissions less than 500 ppm above background, as measured by the method specified in 40 CFR 61.245(c); and</p> <p>Is tested for compliance with 40 CFR 61.242-7(f)(2) initially upon designation, annually, and at other times requested by the Administrator.</p>	40 CFR 61.242-7(f)(1) through (3)
<p>Any valve that is designated, as described in 40 CFR 61.246(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of 40 CFR 61.242-7(a) if:</p> <p>The Permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 61.242-7(a); and</p> <p>The Permittee has a written plan that requires monitoring of the valve as frequent as practicable during safe-to-monitor times.</p>	40 CFR 61.242-7(g)(1) and (2)
<p>Any valve that is designated, as described in 40 CFR 61.246(f)(2), as a difficult-to-monitor valve is exempt from the requirements of 40 CFR 61.242-7(a) if:</p> <p>The Permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;</p> <p>The process unit within which the valve is located is an existing process unit; and</p> <p>The Permittee follows a written plan that requires monitoring of the valve at least once per calendar year.</p>	40 CFR 61.242-7(h)(1) through (3)
<p>Standards: Pressure Relief Services in Liquid Service and Connectors</p>	40 CFR 61.242-8
<p>If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pressure relief devices in liquid service and connectors, the owner or operator shall follow either one of the following procedures, except as provided in 40 CFR 61.242-1(c):</p> <p>The Permittee shall monitor the equipment within 5 days by the method specified in 40 CFR 61.245(b) and shall comply with the requirements of 40 CFR 61.242-8(b) through (d).</p> <p>The Permittee shall eliminate the visual, audible, olfactory, or other indication of a potential leak.</p>	40 CFR 61.242-8(a)(1) and (2)
<p>If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.</p>	40 CFR 61.242-8(b)
<p>When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 61.242-10.</p> <p>The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.</p>	40 CFR 61.242-8(c)(1) and (2)
<p>First attempts at repair include, but are not limited to, the best practices described under 40 CFR 61.242-7(e).</p>	40 CFR 61.242-8(d)
<p>Standards: Delay of Repair</p>	40 CFR 61.242-10
<p>Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.</p>	40 CFR 61.242-10(a)
<p>Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the process and that does not remain in VHAP service.</p>	40 CFR 61.242-10(b)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Delay of repair for valves will be allowed if:</p> <p>The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and</p> <p>When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 61.242-11.</p>	<p>40 CFR 61.242-10(c)(1) and (2)</p>
<p>Delay of repair for pumps will be allowed if:</p> <p>Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and</p> <p>Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.</p>	<p>40 CFR 61.242-10(d)(1) and (2)</p>
<p>Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.</p>	<p>40 CFR 61.242-10(e)</p>
<p>Alternative Standards for Valves in VHAP Service -- Allowable Percentage of Valves Leaking.</p>	<p>40 CFR 61.243-1</p>
<p>The Permittee may elect to have all valves within a process unit to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.</p>	<p>40 CFR 61.243-1(a)</p>
<p>The following requirements shall be met if the Permittee decides to comply with an allowable percentage of valves leaking:</p> <p>The Permittee must notify the Administrator that the Permittee has elected to have all valves within a process unit to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in 40 CFR 61.247(d).</p> <p>A performance test as specified in 40 CFR 61.243-1(c) shall be conducted initially upon designation, annually, and at other times requested by the Administrator.</p> <p>If a valve leak is detected, it shall be repaired in accordance with 40 CFR 61.242-7(d) and (e).</p>	<p>40 CFR 61.243-1(b)(1) through (3)</p>
<p>Performance tests shall be conducted in the following manner:</p> <p>All valves in VHAP service within the process unit shall be monitored within 1 week by the methods specified in 40 CFR 61.245(b).</p> <p>If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.</p> <p>The leak percentage shall be determined by dividing the number of valves in VHAP service for which leaks are detected by the number of valves in VHAP service within the process unit.</p>	<p>40 CFR 61.243-1(c)(1) through (3)</p>
<p>Permittees who elect to have all valves comply with this alternative standard shall not have a process unit with a leak percentage greater than 2.0 percent.</p>	<p>40 CFR 61.243-1(d)</p>
<p>If the Permittee decides no longer to comply with the Allowable Percentage of Valves Leaking Standard in 40 CFR 61.243-1, the Permittee must notify the Administrator in writing that the work practice standard described in 40 CFR 61.242-7(a)-(e) will be followed.</p>	<p>40 CFR 61.243-1(e)</p>
<p>Alternative Standards for Valves in VHAP Service -- Skip Period Leak Detection and Repair.</p>	<p>40 CFR 61.243-2</p>
<p>The Permittee may elect for all valves within a process unit to comply with one of the alternative work practices specified in 40 CFR 61.243-2(b)(2) and (3).</p> <p>The Permittee must notify the Administrator before implementing one of the alternative work practices, as specified in 40 CFR 61.247(d).</p>	<p>40 CFR 61.243-2(a)(1) and (2)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>The Permittee shall comply initially with the requirements for valves, as described in 40 CFR 61.242-7.</p> <p>After 2 consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2.0, the Permittee may begin to skip one of the quarterly leak detection periods for the valves in VHAP service.</p> <p>After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2.0, the Permittee may begin to skip three of the quarterly leak detection periods for the valves in VHAP service.</p> <p>If the percentage of valves leaking is greater than 2.0, the Permittee shall comply with the requirements as described in 40 CFR 61.242-7 but may again elect to use this section.</p>	<p>40 CFR 61.243-2(b)(1) through (4)</p>
<p>Alternative Means of Emission Limitation.</p>	<p>40 CFR 61.244</p>
<p>Permission to use an alternative means of emission limitation under section 112(e)(3) of the Clean Air Act shall be governed by the procedures in 40 CFR 61.244 and outlined below.</p>	<p>40 CFR 61.244(a)</p>
<p>Where the standard is an equipment, design, or operational requirement:</p> <p>The Permittee applying for permission shall be responsible for collecting and verifying test data for an alternative means of emission limitation to test data for the equipment, design, and operational requirements.</p> <p>The Administrator may condition the permission on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.</p>	<p>40 CFR 61.244(b)(1) and (2)</p>
<p>Where the standard is a work practice:</p> <p>The Permittee shall be responsible for collecting and verifying test data for an alternative means of emission limitation.</p> <p>For each source the emission reduction achieved by the required work practices shall be demonstrated for a minimum period of 12 months.</p> <p>For each source the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.</p> <p>The Permittee shall commit in writing each source to work practices that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practices.</p> <p>(continued below)</p>	<p>40 CFR 61.244(c)(1) through (6)</p>
<p>(continued)</p> <p>The Administrator will compare the demonstrated emission reduction for the alternative means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in 40 CFR 61.244(c)(4).</p> <p>The Administrator may condition the permission on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practices of subpart V.</p>	<p>40 CFR 61.244(c)(1) through (6) (continued)</p>
<p>The Permittee may offer a unique approach to demonstrate the alternative means of emission limitation.</p>	<p>40 CFR 61.244(d)</p>
<p>Manufacturers of equipment used to control equipment leaks of a VHAP may apply to the Administrator for permission for an alternative means of emission limitation that achieves a reduction in emissions of the VHAP achieved by the equipment, design, and operational requirements of subpart V.</p> <p>The Administrator will grant permission according to the provisions of 40 CFR 61.244(b), (c), and (d).</p>	<p>40 CFR 61.244(e)</p>
<p>Test Methods and Procedures.</p>	<p>40 CFR 61.245</p>
<p>Each Permittee subject to the provisions of subpart V shall comply with the test methods and procedures requirements provided in 40 CFR 61.245.</p>	<p>40 CFR 61.245(a)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Monitoring, as required in 40 CFR 61.242, 61.243, 61.244, and 61.135, shall comply with the following requirements:</p> <p>Monitoring shall comply with Method 21 of appendix A of 40 CFR part 60.</p> <p>The detection instrument shall meet the performance criteria of Method 21. The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21.</p> <p>Calibration gases shall be:          - Zero air (less than 10 ppm of hydrocarbon in air); and          - A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.</p> <p>The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21.</p>	<p>40 CFR 61.245(b)(1) through (5)</p>
<p>When equipment is tested for compliance with or monitored for no detectable emissions, the Permittee shall comply with the following requirements:</p> <p>The requirements of 40 CFR 61.245(b)(1) through (4) shall apply. The background level shall be determined, as set forth in Method 21.</p> <p>The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21.</p> <p>The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.</p>	<p>40 CFR 61.245(c)(1) through (4)</p>
<p>Each piece of equipment within a process unit that can conceivably contain equipment in VHAP service is presumed to be in VHAP service unless the Permittee demonstrates that the piece of equipment is not in VHAP service. For a piece of equipment to be considered not in VHAP service, it must be determined that the percent VHAP content can be reasonably expected never to exceed 10 percent by weight. For purposes of determining the percent VHAP content of the process fluid that is contained in or contacts equipment, procedures that conform to the methods described in ASTM Method D-2267 (incorporated by the reference as specified in 40 CFR 61.18) shall be used.</p>	<p>40 CFR 61.245(d)(1)</p>
<p>The Permittee may use engineering judgment rather than the procedures in 40 CFR 61.245(d)(1) to demonstrate that the percent VHAP content does not exceed 10 percent by weight, provided that the engineering judgment demonstrates that the VHAP content clearly does not exceed 10 percent by weight. When the Permittee and the Administrator do not agree on whether a piece of equipment is not in VHAP service, however, the procedures in 40 CFR 61.245(d)(1) shall be used to resolve the disagreement.</p> <p>If the Permittee determines that a piece of equipment is in VHAP service, the determination can be revised only after following the procedures in 40 CFR 61.245(d)(1).</p>	<p>40 CFR 61.245(d)(2)(i) and (ii)</p>
<p>Samples used in determining the percent VHAP content shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.</p>	<p>40 CFR 61.245(d)(3)</p>
<p>Recordkeeping Requirements.</p>	<p>40 CFR 61.246</p>
<p>A Permittee subject to the provisions of subpart V shall comply with the recordkeeping requirements of 40 CFR 61.246.</p> <p>The Permittee of more than one process unit subject to the provisions of subpart V may comply with the recordkeeping requirements for these process units in one recordkeeping system if the system identifies each record by each process unit.</p>	<p>40 CFR 61.246(a)(1) and (2)</p>
<p>When each leak is detected as specified in 40 CFR 61.242-2, 61.242-3, 61.242-7, 61.242-8, and 61.135, the following requirements apply:</p> <p>A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.</p> <p>The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 61.242-7(c) and no leak has been detected during those 2 months.</p> <p>The identification on equipment, except on a valve, may be removed after it has been repaired.</p>	<p>40 CFR 61.246(b)(1) through (3)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>When each leak is detected as specified in 40 CFR 61.242-2, 61.242-3, 61.242-7, 61.242-8, and 61.135, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:</p> <p>The instrument, operator and equipment identification numbers. The dates the leak was detected and each attempt to repair the leak.</p> <p>Repair methods applied in each attempt to repair the leak.</p> <p>"Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR 61.245(a) after each repair attempt is equal to or greater than 10,000 ppm.</p> <p>"Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.</p> <p>(continued below)</p>	<p>40 CFR 61.246(c)(1) through (9)</p>
<p>(continued)</p> <p>The signature of the Permittee whose decision it was that repair could not be effected without a process shutdown.</p> <p>The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.</p> <p>Dates of process unit shutdowns that occur while the equipment is unrepaired.</p> <p>The date of successful repair of the leak.</p>	<p>40 CFR 61.246(c)(1) through (9) (continued)</p>
<p>The following information for all equipment to which a standard applies shall be recorded in a log that is kept readily accessible:</p> <p>A list of identification numbers for equipment (except welded fittings) subject to the requirements of subpart V.</p> <ul style="list-style-type: none"> <li>- A list of identification numbers for equipment that the Permittee elects to designate for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background.</li> <li>- The designation of this equipment for no detectable emissions shall be signed by the Permittee.</li> </ul> <p>A list of equipment identification numbers for pressure relief devices complying with 40 CFR 61.242-4(a).</p> <ul style="list-style-type: none"> <li>- The dates of each compliance test required in 40 CFR 61.242-2(e), 61.242-3(i), 61.242-4, 61.242-7(f), and 61.135(g).</li> <li>- The background level measured during each compliance test.</li> <li>- The maximum instrument reading measured at the equipment during each compliance test.</li> </ul> <p>A list of identification numbers for equipment in vacuum service.</p>	<p>40 CFR 61.246(e)(1) through (5)</p>
<p>The following information pertaining to all valves subject to the requirements of 40 CFR 61.242-7(g) and (h) (unsafe- or difficult-to-monitor) and to all pumps subject to the requirements of 40 CFR 61.242-2(g) (unsafe-to-monitor) shall be recorded in a log that is kept in a readily accessible location:</p> <p>A list of identification numbers for valves and pumps that are designated as unsafe to monitor, an explanation for each valve or pump stating why the valve or pump is unsafe to monitor, and the plan for monitoring each valve or pump.</p> <p>A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.</p>	<p>40 CFR 61.246(f)(1) and (2)</p>
<p>The following information shall be recorded for valves complying with 40 CFR 61.243-2 (skip period leak detection and repair):</p> <p>A schedule of monitoring.</p> <p>The percent of valves found leaking during each monitoring period.</p>	<p>40 CFR 61.246(g)(1) and (2)</p>
<p>The following information shall be recorded in a log that is kept in a readily accessible location:</p> <p>Design criterion required in 40 CFR 61.242-2(d)(5), 61.242-3(e)(2), and 61.135(e)(4) and an explanation of the design criterion; and</p> <p>Any changes to this criterion and the reasons for the changes.</p>	<p>40 CFR 61.246(h)(1) and (2)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in the applicability section of subpart V and other specific subparts:</p> <p>An analysis demonstrating the design capacity of the process unit, and</p> <p>An analysis demonstrating that equipment is not in VHAP service.</p>	<p>40 CFR 61.246(i)(1) and (2)</p>
<p>Information and data used to demonstrate that a piece of equipment is not in VHAP service shall be recorded in a log that is kept in a readily accessible location.</p>	<p>40 CFR 61.246(j)</p>
<p>Reporting Requirements.</p>	<p>40 CFR 61.247</p>
<p>The Permittee of any piece of equipment to which subpart V applies shall submit a statement in writing notifying the Administrator that the requirements of 40 CFR 61.242, 61.245, 61.246, and 61.247 are being implemented.</p>	<p>40 CFR 61.247(a)(1)</p>
<p>In the case of an existing source or a new source which has an initial startup date preceding the effective date, the statement noted in 40 CFR 61.247(a)(1) is to be submitted within 90 days of the effective date, unless a waiver of compliance is granted under 40 CFR 61.11, along with the information required under 40 CFR 61.10. If a waiver of compliance is granted, the statement is to be submitted on a date scheduled by the Administrator.</p>	<p>40 CFR 61.247(a)(2)</p>
<p>The statement noted in 40 CFR 61.247(a)(1) is to contain the following information for each source:</p> <ul style="list-style-type: none"> <li>- Equipment identification number and process unit identification.</li> <li>- Type of equipment (for example, a pump or pipeline valve).</li> <li>- Percent by weight VHAP in the fluid at the equipment.</li> <li>- Process fluid state at the equipment (gas/vapor or liquid).</li> <li>- Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals").</li> </ul>	<p>40 CFR 61.247(a)(5)</p>
<p>A report shall be submitted to the Administrator semiannually starting 6 months after the initial report required in 40 CFR 61.247(a) that includes the following information:</p> <p>Process unit identification.</p> <p>For each month during the semiannual reporting period,</p> <ul style="list-style-type: none"> <li>- Number of valves for which leaks were detected as described in 40 CFR 61.242-7(b) or 40 CFR 61.243-2.</li> <li>- Number of valves for which leaks were not repaired as required in 40 CFR 61.242-7(d).</li> <li>- Number of pumps for which leaks were detected as described in 40 CFR 61.242-2 (b) and (d)(6).</li> <li>- Number of pumps for which leaks were not repaired as required in 40 CFR 61.242-2 (c) and (d)(6).</li> </ul> <p>(continued below)</p>	<p>40 CFR 61.247(b)(1) through (5)</p>
<p>(continued)</p> <ul style="list-style-type: none"> <li>- Number of compressors for which leaks were detected as described in 40 CFR 61.242-3(f).</li> <li>- Number of compressors for which leaks were not repaired as required in 40 CFR 61.242-3(g).</li> <li>- The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.</li> </ul> <p>Dates of process unit shutdowns which occurred within the semiannual reporting period.</p> <p>Revisions to items reported according to 40 CFR 61.247(a) if changes have occurred since the initial report or subsequent revisions to the initial report.</p> <p>The results of all performance tests and monitoring to determine compliance with no detectable emissions and with 40 CFR 40 CFR 61.243-1 and 61.243-2 conducted within the semiannual reporting period.</p>	<p>40 CFR 61.247(b)(1) through (5) (continued)</p>
<p>In the first report submitted as required in 40 CFR 61.247(a), the report shall include a reporting schedule stating the months that semiannual reports shall be submitted. Subsequent reports shall be submitted according to that schedule, unless a revised schedule has been submitted in a previous semiannual report.</p>	<p>40 CFR 61.247(c)</p>
<p>The Permittee electing to comply with the provisions of 40 CFR 61.243-1 and 61.243-2 (alternative standards for valves) shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.</p>	<p>40 CFR 61.247(d)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>An application for approval of construction or modification, 40 CFR 61.05(a) and 61.07, will not be required if:</p> <p>The new source complies with the standard, 40 CFR 61.242;</p> <p>The new source is not part of the construction of a process unit; and</p> <p>In the next semiannual report required by 40 CFR 61.247(b) the information in 40 CFR 61.247(a)(5) is reported.</p>	40 CFR 61.247(e)
---	------------------

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Subject Item:** GP 002 Containers Subject to Subpart PP

**Associated Items:** EU 004 Waste Handling Via Drum Handling

EU 005 Pump Room Drum Handling

What to do	Why to do it
These requirements pertain to the control of air emissions from containers for which 40 CFR 63.688 references the use of subpart PP for such air emission control.	40 CFR 63.920
<p>A container using Container Level 1 controls is one of the following:</p> <ul style="list-style-type: none"> <li>- A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in 40 CFR 63.922(f).</li> <li>- A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (e.g., a lid on a drum, a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a bulk cargo container equipped with a screw-type cap).</li> <li>- An open-top container in which an organic vapor-suppressing barrier is placed on or over the regulated-material in the container such that no regulated-material is exposed to the atmosphere.</li> </ul>	40 CFR 63.922(b)
A container used to meet the requirements of either 40 CFR 63.922(b)(2) or (b)(3) shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the regulated material to the atmosphere and to maintain the equipment integrity for as long as it is in service. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: organic vapor permeability, the effects of contact with the material or its vapor managed in the container; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for container on which the cover is installed.	40 CFR 63.922(c)
Whenever a regulated-material is in a container using Container Level 1 controls, the Permittee must install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as outlined in the following 40 CFR 63.922(d) requirements.	40 CFR 63.922(d)
Opening of a closure device or cover is allowed for the purpose of adding material to the container under the following scenario. In the case when the container is filled to the intended final level in one continuous operation, the Permittee shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.	40 CFR 63.922(d)(1)(i)
Opening of a closure device or cover is allowed for the purpose of adding material to the container under the following scenario. In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the Permittee shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either: the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaves the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.	40 CFR 63.922(d)(1)(ii)
Opening of a closure device or cover is allowed for the purpose of removing material from the container under the following scenario. For the purpose of meeting the requirements of this 40 CFR 63.922, an empty container as defined in 40 CFR 63.921 may be open to the atmosphere at any time (e.g., covers and closure devices are not required to be secured in the closed position on an empty container).	40 CFR 63.922(d)(2)(i)
Opening of a closure device or cover is allowed for the purpose of removing material from the container under the following scenario. In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in 40 CFR 63.921, the Permittee shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes, or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.	40 CFR 63.922(d)(2)(ii)
Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of regulated-material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the Permittee shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.	40 CFR 63.922(d)(3)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the container internal pressure in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the container internal pressure is within the internal pressure operating range determined by the Permittee based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.</p>	<p>40 CFR 63.922(d)(4)</p>
<p>Opening of a safety device, as defined in 40 CFR 63.921, is allowed at any time conditions require it to do so to avoid an unsafe condition.</p>	<p>40 CFR 63.922(d)(4)</p>
<p>The Permittee shall inspect containers using Container Level 1 controls in accordance with the procedures specified in 40 CFR 63.926(a).</p>	<p>40 CFR 63.922(e)</p>
<p>For the purpose of compliance with 40 CFR 63.922(b)(1), containers shall be used that meet the applicable U.S. DOT regulations on packaging hazardous materials for transportation as outlined in the following 40 CFR 63.922(f) requirements.</p>	<p>40 CFR 63.922(f)</p>
<p>The container must meet the applicable requirements specified in 49 CFR 178 -- Specifications for Packagings or 49 CFR 179 -- Specifications for Tank Cars.</p>	<p>40 CFR 63.922(f)(1)</p>
<p>Regulated-material must be managed in the container in accordance with the applicable requirements specified in 49 CFR 107(B) -- Exemptions; 49 CFR 172 -- Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR 173 -- Shippers -- General Requirements for Shipments and Packaging; and 49 CFR 180 -- Continuing Qualification and Maintenance of Packagings.</p>	<p>40 CFR 63.922(f)(2)</p>
<p>For the purpose of complying with 40 CFR 63.922, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed except as provided for in 40 CFR 63.922(f)(4).</p>	<p>40 CFR 63.922(f)(3)</p>
<p>For a lab pack that is managed in accordance with the requirements of 49 CFR 178 for the purpose of complying with 40 CFR 63.922, the Permittee may comply with the exceptions for those packagings specified in 49 CFR 173.12(b).</p>	<p>40 CFR 63.922(f)(4)</p>
<p>The Permittee using Level 1 container controls in accordance with the provisions of 40 CFR 63.922, shall inspect the containers and their cover and closure devices according to the following requirements.</p>	<p>40 CFR 63.926(a)</p>
<p>When a regulated-material already is in the container at the time the Permittee first accepts possession of the container and the container is not emptied within 24 hours after the container has been accepted at the facility site, the container and its cover and closure devices shall be visually inspected by the Permittee to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. This inspection of the container must be conducted on or before the date that the container is accepted at the facility (i.e., the date that the container becomes subject to the standards under subpart PP). The date of acceptance is the date of signature of the Permittee on the manifest or shipping papers accompanying the container. If a defect is detected, the Permittee shall repair the defect in accordance with the requirements of 40 CFR 63.926(a)(3).</p>	<p>40 CFR 63.926(a)(1)</p>
<p>In the case when a container filled or partially filled with regulated-material remains unopened at the facility site for a period of 1 year or more, the container and its cover and closure devices shall be visually inspected by the Permittee initially and thereafter, at least once every calendar year, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the Permittee shall repair the defect in accordance with the requirements of 40 CFR 63.926(a)(3).</p>	<p>40 CFR 63.926(a)(2)</p>
<p>When a defect is detected for the container, cover, or closure devices, the Permittee must either empty the regulated-material from the defective container in accordance with 40 CFR 63.926(a)(3)(i) or repair the defective container in accordance with 40 CFR 63.926(a)(3)(ii).</p>	<p>40 CFR 63.926(a)(3)</p>
<p>If the Permittee elects to empty the regulated-material from the defective container, the Permittee must remove the regulated-material from the defective container to meet the conditions for an empty container (as defined in 40 CFR 63.921) and transfer the removed regulated-material to either a container that meets the applicable standards under subpart PP or to a tank, process, or treatment unit that meets the applicable standards. Transfer of the regulated-material must be completed no later than 5 calendar days after detection of the defect. The emptied defective container must be either repaired, destroyed, or used for purposes other than management of regulated-material.</p>	<p>40 CFR 63.926(a)(3)(i)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>If the Permittee elects not to empty the regulated-material from the defective container, the owner or operator must repair the defective container. First efforts at repair of the defect must be made no later than 24 hours after detection and repair must be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the regulated-material must be emptied from the container and the container must not be used to manage regulated-material until the defect is repaired.</p>	<p>40 CFR 63.926(a)(3)(ii)</p>
--	--------------------------------

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Subject Item: GP 003 Tanks Subject to Subpart OO**

- Associated Items:**
- TK 004 Waste Solvent - Blend Tank 1
  - TK 005 Waste Solvent - Blend Tank 2
  - TK 006 Waste Solvent - Blend Tank 3
  - TK 007 Waste Solvent - Tank 3 (Overflow Tank)
  - TK 008 Waste Solvent - Tank 4
  - TK 009 Waste Solvent - Tank 5
  - TK 010 Waste Solvent - Tank 6
  - TK 011 Waste Solvent - Tank 7
  - TK 012 #2 Fuel Oil - Tank 8
  - TK 013 Waste Solvent - Tank 9
  - TK 014 Waste Solvent - Tank 10
  - TK 015 Decant
  - TK 016 Sludge Blend Tank
  - TK 017 Sludge Feed Tank

What to do	Why to do it
Applicability	40 CFR 63.900
The provisions of subpart OO apply to the control of air emissions from tanks for which another subpart of 40 CFR parts 60, 61, or 63 references the use of subpart OO for such air emission control.	40 CFR 63.900
This section applies to Permittees subject to subpart OO and controlling air emissions from a tank using a fixed roof. This section does not apply to a fixed-roof tank that is also equipped with an internal floating roof.	40 CFR 63.902(a)
<p>The tank shall be equipped with a fixed roof designed to meet the following specifications:</p> <p>The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank. The fixed roof may be a separate cover installed on the tank (e.g., a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (e.g., a horizontal cylindrical tank equipped with a hatch).</p> <p>(continued below)</p>	40 CFR 63.902(b)(1) through (4)
<p>(continued)</p> <p>The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.</p> <p>Each opening in the fixed roof, and any manifold system associated with the fixed roof, shall be either:</p> <ul style="list-style-type: none"> <li>- equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or</li> <li>- connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organics in the vent stream, and shall be operating whenever regulated material is managed in the tank.</li> </ul> <p>(continued below)</p>	40 CFR 63.902(b)(1) through (4) (continued)
<p>The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the regulated-material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: organic vapor permeability, the effects of any contact with the liquid or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.</p>	40 CFR 63.902(b)(1) through (4) (continued)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Whenever a regulated-material is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows:</p> <p>Opening of closure devices or removal of the fixed roof is allowed at the following times:</p> <ul style="list-style-type: none"> <li>- To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the Permittee shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.</li> <li>- To remove accumulated sludge or other residues from the bottom of tank.</li> </ul> <p>(continued below)</p>	<p>40 CFR 63.902(c)(1) through (3)</p>
<p>(continued)</p> <p>Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the Permittee based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials.</p> <p>(continued below)</p>	<p>40 CFR 63.902(c)(1) through (3) (continued)</p>
<p>(continued)</p> <p>Opening of a safety device, as defined in 40 CFR 63.901 is allowed at any time conditions require it to do so to avoid an unsafe condition.</p>	<p>40 CFR 63.902(c)(1) through (3) (continued)</p>
<p>The Permittee shall inspect the air emission control equipment in accordance with the requirements specified in 40 CFR 63.906(a).</p>	<p>40 CFR 63.902(d)</p>
<p>Test Methods and Procedures.</p>	<p>40 CFR 63.905</p>
<p>Procedure for determining no detectable organic emissions for the purpose of complying with subpart OO.</p> <p>The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices shall be checked.</p> <p>Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.</p> <p>(continued)</p>	<p>40 CFR 63.905(a)(1) through (9)</p>
<p>The test shall be performed when the unit contains a material having a total organic concentration representative of the range of concentrations for the materials expected to be managed in the unit. During the test, the cover and closure devices shall be secured in the closed position.</p> <p>The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the organic constituents in the material placed in the unit, not for each individual organic constituent.</p> <p>The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.</p> <p>(continued below)</p>	<p>40 CFR 63.905(a)(1) through (9) (continued)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(continued)</p> <p>Calibration gases shall be as follows:                  - Zero air (less than 10 ppmv hydrocarbon in air); and                  - A mixture of methane or n-hexane in air at a concentration of approximately, but less than 10,000 ppmv.</p> <p>The Permittee may choose to adjust or not adjust the detection instrument readings to account for the background organic concentration level. If the Permittee chooses to adjust the instrument readings for the background level, the background level value must be determined according to the procedures in Method 21 of 40 CFR part 60, appendix A.</p>	<p>40 CFR 63.905(a)(1) through (9) (continued)</p>
<p>(continued below)</p> <p>(continued)</p> <p>Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.</p>	<p>40 CFR 63.905(a)(1) through (9) (continued)</p>
<p>(continued below)</p> <p>(continued)</p> <p>The Permittee must determine if a potential leak interface operates with no detectable emissions using the applicable procedure specified in 40 CFR 63.905(a)(8)(i) or (a)(8)(ii).                  - If the Permittee chooses not to adjust the detection instrument readings for the background organic concentration level, then the maximum organic concentration value measured by the detection instrument is compared directly to the applicable value for the potential leak interface as specified in 40 CFR 63.905(a)(9).                  - If the Permittee chooses to adjust the detection instrument readings for the background organic concentration level, the value of the arithmetic difference between the maximum organic concentration value measured by the instrument and the background organic concentration value as determined in 40 CFR 63.905(a)(6) is compared with the applicable value for the potential leak interface as specified in 40 CFR 63.905(a)(9).</p>	<p>40 CFR 63.905(a)(1) through (9) (continued)</p>
<p>(continued below)</p> <p>(continued)</p> <p>A potential leak interface is determined to operate with no detectable emissions using the applicable criteria specified in 40 CFR 63.905(a)(9)(i) and (a)(9)(ii).                  - For a potential leak interface other than a seal around a shaft that passes through a cover opening, the potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in 40 CFR 63.905(a)(8) is less than 500 ppmv.                  - For a seal around a shaft that passes through a cover opening, the potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in 40 CFR 63.905(a)(8) is less than 10,000 ppmv.</p>	<p>40 CFR 63.905(a)(1) through (9) (continued)</p>
<p>Inspection and Monitoring Requirements</p>	<p>40 CFR 63.906</p>
<p>Permittees that use a tank equipped with a fixed roof in accordance with the provisions of 40 CFR 63.902 shall meet the following requirements:</p> <p>The fixed roof and its closure devices shall be visually inspected by the Permittee to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.</p> <p>(continued below)</p>	<p>40 CFR 63.906(a)(1) through (4)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(continued)</p> <p>The Permittee must perform an initial inspection following installation of the fixed roof. Thereafter, the Permittee must perform the inspections at least once every calendar year except as provided for in 40 CFR 63.906(d).</p> <p>In the event that a defect is detected, the Permittee shall repair the defect in accordance with the requirements of 40 CFR 63.906(b).</p> <p>The Permittee shall maintain a record of the inspection in accordance with the requirements specified in 40 CFR 63.907(a).</p>	<p>40 CFR 63.906(a)(1) through (4) (continued)</p>
<p>The Permittee shall repair all detected defects as follows:</p> <p>The Permittee shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in 40 CFR 63.906(b)(2).</p> <p>Repair of a defect may be delayed beyond 45 calendar days if the Permittee determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the regulated material normally managed in the tank. In this case, the Permittee shall repair the defect the next time alternative tank capacity becomes available and the tank can be emptied or temporarily removed from service, as necessary to complete the repair.</p>	<p>40 CFR 63.906(b)(1) and (2)</p>
<p>The Permittee shall maintain a record of the defect repair in accordance with the requirements specified in 40 CFR 63.907(b).</p>	<p>40 CFR 63.906(c)</p>
<p>Alternative inspection and monitoring interval. Following the initial inspection and monitoring of a fixed roof in accordance with 40 CFR 63.906, subsequent inspection and monitoring of the equipment may be performed at intervals longer than 1 year when an Permittee determines that performing the required inspection or monitoring procedures would expose a worker to dangerous, hazardous, or otherwise unsafe conditions and the Permittee complies with the requirements specified in 40 CFR 63.906(d)(1) and (d)(2).</p> <p>The Permittee must prepare and maintain at the plant site written documentation identifying the specific air pollution control equipment designated as "unsafe to inspect and monitor." The documentation must include for each piece of air pollution control equipment designated as such a written explanation of the reasons why the equipment is unsafe to inspect or monitor using the applicable procedures under 40 CFR 63.906.</p>	<p>40 CFR 63.906(d)(1) and (2)</p>
<p>(continued below)</p> <p>The Permittee must develop and implement a written plan and schedule to inspect and monitor the air pollution control equipment using the applicable procedures specified in 40 CFR 63.906 during times when a worker can safely access the air pollution control equipment. The required inspections and monitoring must be performed as frequently as practicable but do not need to be performed more frequently than the periodic schedule that would be otherwise applicable to the air pollution control equipment under the provisions of 40 CFR 63.906. A copy of the written plan and schedule must be maintained at the plant site.</p>	<p>40 CFR 63.906(d)(1) and (2) (continued)</p>
<p>Recordkeeping Requirements</p>	<p>40 CFR 63.907</p>
<p>The Permittee shall prepare and maintain a record for each tank that includes the following information:</p> <p>A tank identification number (or other unique identification description as selected by the Permittee).</p> <p>A description of the tank dimensions and the tank design capacity.</p> <p>The date that each inspection required by 40 CFR 63.906 is performed.</p>	<p>40 CFR 63.907(a)(1) through (3)</p>
<p>The Permittee shall record the following information for each defect detected during inspections required by 40 CFR 63.906:</p> <ul style="list-style-type: none"> <li>- the location of the defect,</li> <li>- a description of the defect,</li> <li>- the date of detection, and corrective action taken to repair the defect.</li> </ul> <p>In the event that repair of the defect is delayed in accordance with the provisions of 40 CFR 63.907(b)(2) the Permittee shall also record the reason for the delay and the date that completion of repair of the defect is expected.</p>	<p>40 CFR 63.907(b)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Subject Item: GP 004 Tanks Subject to Subpart DD**

**Associated Items:** TK 002 Hazardous Waste Solvent

What to do	Why to do it
Applicability	40 CFR 63.685
The Permittee shall control air emissions from a tank required by Part 63, subpart DD, Table 3 to use Tank Level 2 controls in accordance with the requirements of 40 CFR 63.685(d).	40 CFR 63.685(b)(1)
Storage Vessel Control Requirements	40 CFR 63.
The Permittee controlling air emissions from a tank using Tank Level 2 controls may use a tank vented through a closed-vent system to a control device in accordance with the requirements specified in 40 CFR 63.685(g)	40 CFR 63.685(d)
The Permittee who controls tank air emissions by venting to a control device shall meet the requirements specified in 40 CFR 63.685(g)(1) through (g)(3).	40 CFR 63.685(g)
The tank shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements: - The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.  (continued below)	40 CFR 63.685(g)(1)
(continued)  - Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions.  (continued below)	40 CFR 63.685(g)(1) (continued)
(continued)  - The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the off-site material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed. - The closed-vent system and control device shall be designed and operated in accordance with the requirements of 40 CFR 63.693.	40 CFR 63.685(g)(1) (continued)
The fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows: - Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times: (A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Following completion of the activity, the Permittee shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank. (B) To remove accumulated sludge or other residues from the bottom of the tank. - Opening of a safety device is allowed at any time conditions require it to do so to avoid an unsafe condition.	40 CFR 63.685(g)(2)
The Permittee shall inspect and monitor the air emission control equipment in accordance with the procedures specified in 40 CFR 63.695.	40 CFR 63.685(g)(3)
STANDARDS: Closed-vent systems and control devices	40 CFR 63.693
The Permittee must use a closed-vent system that meets the requirements specified in 40 CFR 63.693(c).	40 CFR 63.693(b)(1)
The Permittee must use a flare that meets the requirements specified in 40 CFR 63.693(h) to comply with 40 CFR 63.693.	40 CFR 63.693(b)(2)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

Whenever gases or vapors containing HAP are vented through a closed-vent system connected to a control device used to comply with 40 CFR 63.693, the control device must be operating except at those times listed below: - The control device may be bypassed for the purpose of performing planned routine maintenance of the closed-vent system or control device in situations when the routine maintenance cannot be performed during periods that the emission point vented to the control device is shutdown. On an annual basis, the total time that the closed-vent system or control device is bypassed to perform routine maintenance shall not exceed 240 hours per each calendar year. - The control device may be bypassed for the purpose of correcting a malfunction of the closed-vent system or control device. The Permittee shall perform the adjustments or repairs necessary to correct the malfunction as soon as practicable after the malfunction is detected.	40 CFR 63.693(b)(3)
The Permittee must inspect and monitor the closed-vent system in accordance with the requirements specified in 40 CFR 63.695(c), and comply with the applicable recordkeeping requirements in 40 CFR 63.696 and the applicable reporting requirements in 40 CFR 63.697.	40 CFR 63.693(b)(4)(i)
The Permittee must monitor the operation of each control device in accordance with the requirements specified in 40 CFR 63.693(h).	40 CFR 63.693(b)(5)
The Permittee shall maintain records for the control device in accordance with the requirements of 40 CFR 63.696.	40 CFR 63.693(b)(6)
The Permittee shall prepare and submit reports for each control device in accordance with the requirements of 40 CFR 63.697.	40 CFR 63.693(b)(7)
Closed-vent system requirements	40 CFR 63.693(c)
The vent stream required to be controlled shall be conveyed to the control device by a closed-vent system that is designed to operate with no detectable organic emissions using the procedure specified in 40 CFR 63.694(k).	40 CFR 63.693(c)(1)
Flare control device requirements	40 CFR 63.693(h)
The flare must be designed and operated in accordance with the requirements in 40 CFR 63.11(b).	40 CFR 63.693(h)(1)
The Permittee must demonstrate that the flare achieves the requirements in 40 CFR 63.693(h)(1) by performing the procedures specified in 40 CFR 63.693(h)(2)(i). A previous compliance demonstration for the flare that meets all of the conditions specified in 40 CFR 63.693(h)(2)(ii) may be used to demonstrate compliance with this requirement.	40 CFR 63.693(h)(2)
To demonstrate that a flare achieves the requirements of 40 CFR 63.693(h)(1), the Permittee must perform all of the procedures specified below. - Conduct a visible emission test for the flare in accordance with the requirements specified in 40 CFR 63.11(b)(4). - Determine the net heating value of the gas being combusted in the flare in accordance with the requirements specified in 40 CFR 63.11(b)(6); and - Determine the flare exit velocity in accordance with the requirements applicable to the flare design as specified in 40 CFR 63.11(b)(7) or 40 CFR 63.11(b)(8).	40 CFR 63.693(h)(2)(i)
A previous compliance demonstration for the flare may be used to demonstrate compliance with 40 CFR 63.693(h)(2) provided that all conditions for the compliance determination and subsequent flare operation are met as specified below. - The Permittee conducted the compliance determination using the procedures specified in 40 CFR 63.693(h)(2)(i). - No flare operating parameter or process changes have occurred since completion of the compliance determination which could affect the compliance determination results.	40 CFR 63.693(h)(2)(ii)
The Permittee must monitor the operation of the flare using a heat sensing monitoring device (including but not limited to a thermocouple, ultraviolet beam sensor, or infrared sensor) that continuously detects the presence of a pilot flame. The Permittee must record, for each 1-hour period, whether the monitor was continuously operating and whether a pilot flame was continuously present during each hour.	40 CFR 63.693(h)(3)
Procedure for determining no detectable organic emissions	40 CFR 63.694(k)
The no detectable organic emissions test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.	40 CFR 63.694(k)(1)
The no detectable organic emissions test shall be performed when the unit contains a material having a total organic concentration representative of the range of concentrations for the materials expected to be managed in the unit. During the test, the cover and closure devices shall be secured in the closed position.	40 CFR 63.694(k)(2)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the organic constituents in the material placed in the unit, not for each individual organic constituent.</p>	<p>40 CFR 63.694(k)(3)</p>
<p>The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.</p>	<p>40 CFR 63.694(k)(4)</p>
<p>Calibration gases shall be as follows:                  - Zero air (less than 10 ppmv hydrocarbon in air); and                  - A mixture of methane or n-hexane in air at a concentration of approximately, but less than, 10,000 ppmv.</p>	<p>40 CFR 63.694(k)(5)</p>
<p>The Permittee may choose to adjust or not adjust the detection instrument readings to account for the background organic concentration level. If the Permittee chooses to adjust the instrument readings for the background level, the background level value must be determined according to the procedures in Method 21 of 40 CFR part 60, appendix A.</p>	<p>40 CFR 63.694(k)(6)</p>
<p>Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.</p>	<p>40 CFR 63.694(k)(7)</p>
<p>The Permittee must determine if a potential leak interface operates with no detectable emissions using the applicable procedure specified in 40 CFR 63.694(k)(8)(i) or (k)(8)(ii).                  - If the Permittee chooses not to adjust the detection instrument readings for the background organic concentration level, then the maximum organic concentration value measured by the detection instrument is compared directly to the applicable value for the potential leak interface as specified in 40 CFR 63.694(k)(9).                  - If the Permittee chooses to adjust the detection instrument readings for the background organic concentration level, the value of the arithmetic difference between the maximum organic concentration value measured by the instrument and the background organic concentration value as determined in 40 CFR 63.694(k)(6) is compared with the applicable value for the potential leak interface as specified in 40 CFR 63.694(k)(9).</p>	<p>40 CFR 63.694(k)(8)</p>
<p>A potential leak interface is determined to operate with no detectable emissions using the applicable criteria specified in 40 CFR 63.694(k)(9)(i) and (k)(9)(ii).                  - For a potential leak interface other than a seal around a shaft that passes through a cover opening, the potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in 40 CFR 63.694(k)(8) is less than 500 ppmv.                  - For a seal around a shaft that passes through a cover opening, the potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in 40 CFR 63.694(k)(8) is less than 10,000 ppmv.</p>	<p>40 CFR 63.694(k)(9)</p>
<p>Inspection and Monitoring Requirements</p>	<p>40 CFR 63.695</p>
<p>To inspect tank fixed roofs for compliance with the Tank Level 2 controls standards specified in 40 CFR 63.685, the inspection procedures are specified in 40 CFR 63.695(b).</p>	<p>40 CFR 63.695(a)(1)</p>
<p>A tank with a fixed roof in accordance with 40 CFR 63.685(g) shall meet the following requirements:                  - The fixed roof and its closure devices shall be visually inspected to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the separator wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.                  - Perform an initial inspection following installation of the fixed roof. Thereafter, the Permittee must perform the inspections at least once every calendar year except as provided for in 40 CFR 63.695(f).                  - In the event that a defect is detected, the Permittee shall repair the defect in accordance with the requirements of 40 CFR 63.695(b)(4).                  - Maintain a record of the inspection in accordance with the requirements specified in 40 CFR 63.696(e).</p>	<p>40 CFR 63.695(b)(3)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Repair each defect detected during an inspection performed in accordance with the requirements of 40 CFR 63.695(b)(3) in the following manner:</p> <ul style="list-style-type: none"> <li>- Within 45 calendar days of detecting the defect either repair the defect or empty the tank and remove it from service. If within this 45-day period the defect cannot be repaired or the tank cannot be removed from service without disrupting operations at the plant site, the Permittee is allowed two 30-day extensions. In cases when the Permittee elects to use a 30-day extension, the Permittee shall prepare and maintain documentation describing the defect, explaining why alternative storage capacity is not available, and specify a schedule of actions that will ensure that the control equipment will be repaired or the tank emptied as soon as possible.</li> <li>- When a defect is detected during an inspection of a tank that has been emptied and degassed, the Permittee shall repair the defect before refilling the tank.</li> </ul>	<p>40 CFR 63.695(b)(4)</p>
<p>To inspect and monitor closed-vent systems for compliance with the standards specified in 40 CFR 63.693, the inspection and monitoring procedures are specified in 40 CFR 63.695(c).</p>	<p>40 CFR 63.695(a)(2)</p>
<p>At initial startup, the Permittee shall monitor the closed-vent system components and connections using the procedures specified in 40 CFR 63.694(k) to demonstrate that the closed-vent system operates with no detectable organic emissions.</p>	<p>40 CFR 63.695(c)(1)(i)</p>
<p>After initial startup, inspect and monitor the closed-vent system as follows:</p> <ul style="list-style-type: none"> <li>- Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed shall be visually inspected at least once per year to check for defects that could result in air emissions. Monitor a component or connection using the procedures specified in 40 CFR 63.694(k) to demonstrate that it operates with no detectable organic emissions following any time the component is repaired or replaced.</li> <li>- Closed-vent system components or connections other than those specified in 40 CFR 63.695(c)(1)(ii)(A) shall be monitored at least once per year following 40 CFR 63.694(k) to demonstrate that components or connections operate with no detectable organic emissions.</li> <li>- The continuous monitoring system required by 40 CFR 63.693(b)(4)(i) shall monitor and record either an instantaneous data value at least once every 15 minutes or an average value for intervals of 15 minutes or less.</li> </ul>	<p>40 CFR 63.695(c)(1)(ii)</p>
<p>In the event that a defect or leak is detected, the Permittee shall repair the defect or leak in accordance with the requirements of 40 CFR 63.695(c)(3).</p>	<p>40 CFR 63.695(c)(1)(iii)</p>
<p>The Permittee shall maintain a record of the inspection and monitoring in accordance with the requirements specified in 40 CFR 63.696.</p>	<p>40 CFR 63.695(c)(1)(iv)</p>
<p>Repair all defects as follows:</p> <p>Make first efforts at repair no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection.</p> <p>Repair of a defect may be delayed beyond 45 calendar days if either of the conditions below occurs. The Permittee must repair the defect the next time the process or unit that vents to the closed-vent system is shutdown. Repair of the defect must be completed before the process or unit resumes operation.</p> <ul style="list-style-type: none"> <li>- Completion of the repair is technically infeasible without the shutdown of the unit that vents to the closed-vent system.</li> <li>- The Permittee determines that the air emissions resulting from the repair of the defect within the specified period would be greater than the fugitive emissions likely to result by delaying the repair until the next time the unit that vents to the closed-vent system is shutdown.</li> </ul> <p>Maintain a record of the defect repair as specified in 40 CFR 63.696.</p>	<p>40 CFR 63.695(c)(3)</p>
<p>Recordkeeping Requirements</p>	<p>40 CFR 63.696</p>
<p>The Permittee shall comply with the recordkeeping requirements in 40 CFR 63.10 under 40 CFR 63 subpart A-General Provisions that are applicable to 40 CFR 63, Subpart DD as specified in Table 2 of subpart DD which is attached to this permit as Appendix 2.</p>	<p>40 CFR 63.696(a)</p>
<p>The Permittee using a fixed roof to comply with the tank control requirements in 40 CFR 63.685(g) shall prepare and maintain the following records:</p> <ul style="list-style-type: none"> <li>- A record for each inspection required by 40 CFR 63.695(b), as applicable to the tank, that includes the following information: a tank identification number (or other unique identification description as selected by the Permittee) and the date of inspection.</li> <li>- The Permittee shall record for each defect detected during inspections required by 40 CFR 63.695(b), the following information: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of 40 CFR 63.695(b)(4), the Permittee shall also record the reason for the delay and the date that completion of repair of the defect is expected.</li> </ul>	<p>40 CFR 63.696(e)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>The Permittee shall record, on a semiannual basis, the information specified below for those planned routine maintenance operations that would require the control device not to meet the requirements of 40 CFR 63.693(d) through (h), as applicable.</p> <ul style="list-style-type: none"> <li>- A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.</li> <li>- A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during these 6 months that the control device did not meet the requirement of 40 CFR 63.693 (d) through (h), as applicable, due to planned routine maintenance.</li> </ul>	<p>40 CFR 63.696(g)</p>
<p>The Permittee shall record the information specified below for those unexpected control device system malfunctions that would require the control device not to meet the requirements of 40 CFR 63.693 (d) through (h), as applicable.</p> <ul style="list-style-type: none"> <li>- The occurrence and duration of each malfunction of the control device system.</li> <li>- The duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning.</li> <li>- Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.</li> </ul>	<p>40 CFR 63.696(h)</p>
<p>Reporting Requirements</p>	<p>40 CFR 63.697</p>
<p>The Permittee must submit reports to the Administrator in accordance with the applicable reporting requirements in 40 CFR 63.10 as specified in Table 2 of 40 CFR 63, subpart DD which is attached to this permit as Appendix 2.</p>	<p>40 CFR 63.697(a)(2)</p>
<p>The Permittee using a control device to meet the requirements of 40 CFR 63.693 shall submit the following notifications and reports to the Administrator:</p> <ul style="list-style-type: none"> <li>- A Notification of Performance Tests specified in 40 CFR 63.7 and 63.9(g),</li> <li>- Performance test reports specified in 40 CFR 63.10(d)(2), and</li> </ul> <p>(continued below)</p>	<p>40 CFR 63.697(b)</p>
<p>(continued)</p> <ul style="list-style-type: none"> <li>- Startup, shutdown, and malfunction reports specified in 40 CFR 63.10(d)(5). If actions taken by the Permittee during startup, shutdown, or malfunction are not completely consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state the information in the report. The report shall consist of a letter, containing the name, title, and signature of the responsible official who is certifying its accuracy, that shall be submitted to the Administrator, and</li> </ul> <p>Separate startup, shutdown, or malfunction reports are not required if the information is included in the summary report specified in 40 CFR 63.697(b)(4).</p> <p>(continued below)</p>	<p>40 CFR 63.697(b) (continued)</p>
<p>(continued)</p> <ul style="list-style-type: none"> <li>- A summary report specified in 40 CFR 63.10(e)(3) shall be submitted on a semiannual basis. The summary report must include a description of all excursions as defined in 40 CFR 63.695(e) that have occurred during the 6-month reporting period. For each excursion caused when the daily average value of a monitored operating parameter is less than the minimum operating parameter limit, the report must include the daily average values of the monitored parameter, the applicable operating parameter limit, and the date and duration of the period that the exceedance occurred. For each excursion caused by lack of monitoring data, the report must include the date and duration of the period when the monitoring data were not collected and the reason why the data were not collected.</li> </ul>	<p>40 CFR 63.697(b) (continued)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Subject Item: EU 008 Replacement Rotating Kiln**

- Associated Items:** CE 004 Subcooling Vessel  
 CE 005 M1 Module  
 CE 009 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 CE 010 Venturi Quench  
 CE 011 Electrostatic Precipitator - High Efficiency  
 MR 001  
 MR 002  
 MR 003  
 MR 004

What to do	Why to do it
40 CFR 63, General Provisions	hdr
Most of the General Provisions of Part 63 are applicable to facilities subject to Part 63, Subpart EEE. Table 1 to Subpart EEE of Part 63 identifies the General Provisions that are applicable to Subpart EEE. Table 1 to Subpart EEE and a copy of the applicable portions of the General Provisions have been incorporated into this permit as a fully enforceable appendix to this permit.	40 CFR 63.1 to 63.15
40 CFR 63, SUBPART EEE	hdr
EMISSION LIMITS	hdr
Dioxins and Furans: less than or equal to 0.20 nanograms toxicity equivalence per dry standard cubic meter (TEQ/dscm), corrected to 7 percent oxygen; or less than or equal to 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial particulate matter control device is 400 °F or lower based on the average of the test run average temperatures. (For purposes of compliance, operation of a wet particulate control device is presumed to meet the 400 °F or lower requirement).	40 CFR 63.1203(a)(1)
Mercury: less than or equal to 50.0 micrograms/DSCM corrected to 7 percent oxygen. The more stringent state limit assures compliance with the NESHAP limit of 130 micrograms/DSCM.	Minn. R. 7007.0800, subp. 2; 40 CFR 63.1203(a)(2)
Lead and Cadmium: less than or equal to 240.0 micrograms/DSCM, combined emissions, corrected to 7 percent oxygen.	40 CFR 63.1203(a)(3)
Arsenic, beryllium, and chromium: less than or equal to 97.0 micrograms/DSCM, combined emissions, corrected to 7 percent oxygen.	40 CFR 63.1203(a)(4)
Carbon Monoxide: Less than or equal to 100 parts per million by volume, using 1-hour rolling average (monitored continuously with a CEMS), dry basis and corrected to 7 percent oxygen. If the Permittee elects to comply with this carbon monoxide standard rather than the hydrocarbon standard under 40 CFR 63.1203(a)(5)(ii), the Permittee must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by 40 CFR 63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, using 1-hour rolling average (monitored continuously with a CEMS), dry basis, corrected to 7 percent oxygen, and reported as propane; or	40 CFR 63.1203(a)(5)
Hydrocarbons: less than or equal to 10 parts per million by volume, using 1-hour rolling average (monitored continuously with a CEMS), dry basis, corrected to 7 percent oxygen, and reported as propane.	
Hydrochloric Acid and Chlorine Gas: less than or equal to 77 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen.	40 CFR 63.1203(a)(6)
Total Particulate Matter: less than or equal to 34 milligrams/DSCM ( 0.015 gr/dscf) corrected to 7 percent oxygen.	40 CFR 63.1203(a)(7); Minn. R. 7011.0515, subp. 1
Total Particulate Matter: less than or equal to 0.045 grains/dry standard cubic foot	Minn. R. 7011.0610, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Destruction and Removal Efficiency (DRE) standard: 99.99% DRE. Except as provided in 40 CFR 63.1203(c)(2) the Permittee must achieve a DRE of 99.99% for each principle organic hazardous constituent (POHC) designated under 40 CFR 63.1203(c)(3). The Permittee must calculate DRE for each POHC from the following equation:</p> <p>DRE = [1-(Wout/Win)] x 100% where:</p> <p>Win = mass feedrate of one POHC in a waste feedstream; and</p> <p>Wout = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.</p>	40 CFR 63.1203(c)(1)
<p>Principle Organic Hazardous Constituent (POHC): The Permittee must treat the POHCs in the waste feed that are specified under 40 CFR 63.1203(c)(3)(ii) to the extent required by 40 CFR 63.1203(c)(1) and (c)(2).</p> <p>The Permittee must specify one or more POHCs from the list of hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactum (CAS number 105602) as provided by 40 CFR 63.60, for each waste to be burned. The Permittee must base this specification on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of the waste analyses or other data and information.</p>	40 CFR 63.1203(c)(3)
<p>Significant figures. The emission limits provided by 40 CFR 63.1203(a) are presented with two significant figures. Although the Permittee must perform intermediate calculations using at least three significant figures, the Permittee may round the resultant emission levels to two significant figures to document compliance.</p>	40 CFR 63.1203(d)
<p>Opacity: less than or equal to 20.0 percent opacity</p>	Minn. R. 7011.0110
<p>Sulfur Dioxide: less than or equal to 95 tons/year using 12-month Rolling Sum</p>	Title I Condition to avoid classification as a major source or modification under 40 CFR 52.21
<p>Nitrogen Oxides: less than or equal to 190 parts per million</p>	Title I Condition to avoid classification as a major source or modification under 40 CFR 52.21
<p>Carbon Monoxide: less than or equal to 94.6 tons/year using 12-month Rolling Sum</p>	Title I Condition to avoid classification as a major source or modification under 40 CFR 52.21
<p>Carbon Monoxide: less than or equal to 100 parts per million dry, corrected to 7 percent oxygen, when burning waste.</p>	Minn. R. 7007.0800, subp. 2; Minn. Stat. 116.85
<p>Volatile Organic Compounds: less than or equal to 20 parts per million dry, as THC, corrected to 7 percent oxygen.</p>	Title I Condition to avoid classification as a major source or modification under 40 CFR 52.21
<p>Beryllium: less than or equal to 10.0 grams per 24-hour period</p>	40 CFR Part 61.32 (Subpart C)
<p>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 EPA Administrator or citizens under the Clean Air Act.</p>	Minn. R. 7030.0010 - 7030.0080
<p>FEEDRATE LIMITS</p>	hdr
<p>Process Throughput: less than or equal to 23,300 lbs/hour using 1-Hour Rolling Average of total hazardous waste to the kiln or the maximum process throughput of total hazardous waste to the kiln during the most recent stack emissions testing that demonstrated compliance.</p>	40 CFR 63.1209(j)(3); 40 CFR 63.1206(b)(5)(B)
<p>Process Throughput: less than or equal to 17,000 lbs/hour using 1-Hour Rolling Average of total pumpable waste to the kiln or the maximum process throughput of total pumpable waste to the kiln during the most recent stack emissions testing that demonstrated compliance. "Pumpable" includes solvent plus sludge.</p>	40 CFR 63.1209(j)(3); 40 CFR 63.1206(b)(5)(B)
<p>Process Throughput: less than or equal to 300 lbs/hour using 1-Hour Rolling Average of total and pumpable waste feed rate to the secondary combustion chamber (SCC) or the maximum process throughput of total waste feed rate to the SCC during the most recent stack emissions testing that demonstrated compliance.</p>	40 CFR 63.1209(j)(3); 40 CFR 63.1206(b)(5)(B)
<p>Process Throughput: less than or equal to 3,490 lbs/hour using 12-Hour Rolling Average of ash fed to the system or the maximum process throughput of ash fed to the system during the most recent stack emissions testing that demonstrated compliance.</p>	40 CFR 63.1209(m)(3)
<p>Chlorine: less than or equal to 754 lbs/hour using 12-Hour Rolling Average fed to the system or the maximum amount of chlorine fed to the system during the most recent stack emissions testing that demonstrated compliance.</p>	40 CFR 63.1209(o)(1)
<p>Semi-Volatile Metals - Pb, Cd: less than or equal to 3 lbs/hour using 12-hour rolling average fed to the system or the maximum amount of Semi-Volatile Metals fed to the system during the most recent stack emissions testing that demonstrated compliance.</p>	40 CFR 63.1209(n)(2)(i)(A)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

Low-Volatile Metals - As, Be, Cr: less than or equal to 15 lbs/hour using 12-hour rolling average fed to the system or the maximum amount of Low-Volatile Metals fed to the system during the most recent stack emissions testing that demonstrated compliance.	40 CFR 63.1209(n)(2)(i)(B)
The burning of dioxin/furan-listed wastes F020, F021, F022, F023, F026, or F027 (see 40 CFR 261.31) is prohibited.	40 CFR 63.1203(c)(2)
Mercury: less than or equal to 0.0060 lbs/hour using 12-Hour Rolling Average fed to the system.	40 CFR 63.1209(l)(1)
OPERATING LIMITS	hdr
Temperature: greater than or equal to 1620 degrees F using 1-Hour Rolling Average for a minimum kiln exit gas temperature or the minimum kiln exit gas temperature achieved during the most recent stack emissions testing that demonstrated compliance.	40 CFR 63.1209(j)(1); 40 CFR 63.1209(k)(2)
Temperature: greater than or equal to 1710 degrees F using 1-Hour Rolling Average for a minimum secondary combustion chamber (SCC) exit gas temperature or the minimum SCC exit gas temperature achieved during the most recent stack emissions testing that demonstrated compliance.	40 CFR 63.1209(j)(1); 40 CFR 63.1209(k)(2)
Air Flow Rate: less than or equal to 40,000 dry standard cubic feet/minute using 1-Hour Rolling Average for a maximum flue gas flow rate or the maximum flue gas flow rate achieved during the most recent stack emissions testing that demonstrated compliance.	40 CFR 63.1209(j)(2); 40 CFR 63.1209(k)(3)
Air Flow Rate: greater than or equal to 33,100 dry standard cubic feet/minute using 12-Hour Rolling Average (937 dry standard cubic meters/minute) minimum flue gas flow rate or the minimum flue gas flow rate.	40 CFR 63.1207(m)(4)
The Permittee shall maintain a minimum atomization pressure of 31 PSIG in the burner and the lances using 1-hour rolling average.	40 CFR 63.1209(j)(4)
WHEN AND HOW MUST THE PERMITTEE COMPLY WITH THE STANDARDS AND OPERATING REQUIREMENTS	hdr
COMPLIANCE STANDARDS	hdr
(RECORDKEEPING)  The emission standards and operating requirements set forth in subpart EEE apply at all times except: - During periods of startup, shutdown, and malfunction; and - When hazardous waste is not in the combustion chamber (i.e., the hazardous waste feed to the combustor has been cut off for a period of time not less than the hazardous waste residence time) and the Permittee has documented in the operating record that the facility is complying with all otherwise applicable requirements and standards promulgated under authority of sections 112 or 129 of the Clean Air Act in lieu of the emission standards of 40 CFR 63.1203; the monitoring and compliance standards of 40 CFR 63.1206 and 40 CFR 63.1207 through 63.1209, and the notification, reporting, and recordkeeping requirements of 40 CFR 63.1210 through 63.1212.	40 CFR 63.1206(b)(1)
(NOTIFICATION)  Changes in Design, Operation, or Maintenance; Changes That May Adversely Affect Compliance: If the Permittee plans to change the design, operation, or maintenance practices of the source in a manner that may adversely affect compliance with any emission standard that is not monitored with a CEMS the Permittee must:  Notify the Administrator at least 60 days prior to the change, unless the Permittee documents circumstances that dictate that such prior notice is not reasonably feasible. The notification must include a description of the changes and which emission standards may be affected; and a comprehensive performance test schedule and test plan under the requirements of 40 CFR 63.1207(f) that will document compliance with the affected emission standard(s);	40 CFR 63.1206(b)(5)(i)

(continued below)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(continued)</p> <p>(NOTIFICATION)</p> <p>Conduct a comprehensive performance test under the requirements of 40 CFR 63.1207(f)(1) &amp; (g)(1) to document compliance with the affected emission standards and establish operating parameter limits as required under 40 CFR 63.1209, and submit a Notification of Compliance; and</p> <p>Except as provided by 40 CFR 63.1206(b)(5)(i)(C)(2), after the change and prior to submitting the notification of compliance, the Permittee must not burn hazardous waste for more than 720 hours and only for the purposes of pretesting or comprehensive performance testing. Pretesting is defined at 40 CFR 63.1207(h)(2)(i) and (ii).</p> <p>(continued below)</p>	<p>40 CFR 63.1206(b)(5)(i) (continued)</p>
<p>(REQUEST/PETITION)</p> <p>(continued)</p> <p>The Permittee may petition the Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. The Permittee must specify operating requirements, including limits on operating parameters, that the Permittee determines will ensure compliance with the emission standards of subpart EEE based on available information. The Administrator will review, modify as necessary, and approve if warranted the interim operating requirements.</p>	<p>40 CFR 63.1206(b)(5)(i) (continued)</p>
<p>(RECORDKEEPING)</p> <p>Changes That Will Not Affect Compliance: If the Permittee determines that a change will not adversely affect compliance with the emission standards or operating requirements, the Permittee must document the change in the operating record upon making such change. The Permittee must revise as necessary the performance test plan, Documentation of Compliance, Notification of Compliance, and start-up, shutdown, and malfunction plan to reflect these changes.</p>	<p>40 CFR 63.1206(b)(5)(ii)</p>
<p>Compliance With the CO and Hydrocarbon Emission Standards: This requirement applies to sources that elect to comply with the CO and hydrocarbon emissions standards under 40 CFR 63.1203 - 63.1205 by documenting continuous compliance with the CO standard using a CEMS and documenting compliance with the hydrocarbon standard during the destruction and removal efficiency (DRE) performance test or its equivalent.</p> <p>If a DRE test performed pursuant to 40 CFR 63.1207(c)(2) is acceptable as documentation of compliance with the DRE standard, use the highest hourly rolling average hydrocarbon level achieved during the DRE test runs to document compliance with the hydrocarbon standard. An acceptable DRE test is any test for which the data and results are determined to meet quality assurance objectives (on a site-specific basis) such that the results adequately demonstrate compliance with the DRE standard.</p> <p>(continued below)</p>	<p>40 CFR 63.1206(b)(6)</p>
<p>(continued)</p> <p>If during this acceptable DRE test the Permittee did not obtain hydrocarbon emissions data sufficient to document compliance with the hydrocarbon standard, the Permittee must either:</p> <ul style="list-style-type: none"> <li>- Perform, as part of the performance test, an "equivalent DRE test" to document compliance with the hydrocarbon standard. An equivalent DRE test is comprised of a minimum of three runs each with a minimum duration of one hour during which the Permittee operates the combustor as close as reasonably possible to the operating parameter limits established based on the initial DRE test. The Permittee must use the highest hourly rolling average hydrocarbon emission level achieved during the equivalent DRE test to document compliance with the hydrocarbon standard; or</li> <li>- Perform a DRE test as part of the performance test.</li> </ul>	<p>40 CFR 63.1206(b)(6) (continued)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>DRE: Document compliance with the DRE standard only once provided that the Permittee does not modify the source after the DRE test in a manner that could affect the ability of the source to achieve the DRE standard.</p> <p>Use any DRE test data that documents that the source achieves the required level of DRE provided:</p> <ul style="list-style-type: none"> <li>- the Permittee has not modified the design or operation of the source in a manner that could effect the ability of the source to achieve the DRE standard since the DRE test was performed; and,</li> <li>- the DRE test data meet quality assurance objectives determined on a site-specific basis.</li> </ul> <p>Sources that feed hazardous waste at a location in the combustion system other than the normal flame zone must demonstrate compliance with the DRE standard during each comprehensive performance test.</p> <p>For sources that do not use DRE previous testing to document conformance with the DRE standard, the Permittee must perform DRE testing during the initial comprehensive performance test.</p>	<p>40 CFR 63.1206(b)(7)</p>
<p>(RECORDKEEPING)</p> <p>Calculation of hazardous waste residence time. Calculate the hazardous waste residence time and include the calculation in the:</p> <ul style="list-style-type: none"> <li>- Performance Test Plan under 40 CFR 63.1207(f);</li> <li>- Operating Record;</li> <li>- Documentation of Compliance under 40 CFR 63.1211(c); and the</li> <li>- Notification of Compliance under 40 CFR 63.1207(j) and 63.1210(b)</li> </ul>	<p>40 CFR 63.1206(b)(11)</p>
<p>Documenting Compliance With the Standards Based on Performance Testing. Conduct a minimum of three runs of a performance test required under 40 CFR 63.1207 to document compliance with the emission standards of 40 CFR 63.1203.</p> <p>Document compliance with the emission standards based on the arithmetic average of the emission results of each run, except document compliance with the destruction and removal efficiency standard for each run of the comprehensive performance test individually.</p>	<p>40 CFR 63.1206(b)(12)</p>
<p>Alternative to the Particulate Matter Standard for Incinerators: 3M has chosen to comply with the applicable particulate matter standard of 40 CFR 63.1203(b)(7). If they elect to instead comply with the alternative metal emission control requirements described in 40 CFR 63.1206(b)(14)(ii) in the future, they must comply with the applicable requirements of 40 CFR 63.1206(b)(14).</p>	<p>40 CFR 63.1206(b)(14)</p>
<p>OPERATING REQUIREMENTS</p>	<p>hdr</p>
<p>General: The Permittee must operate only under the operating requirements specified in the Documentation of Compliance under 40 CFR 63.1211(c) or the Notification of Compliance under 40 CFR 63.1207(j) and 1210(b), except:</p> <ul style="list-style-type: none"> <li>- During performance tests under approved test plans according to 40 CFR 63.1207(e), (f), and (g), and</li> <li>- Under the conditions of 40 CFR 63.1206(b)(1)(i) or (ii)</li> </ul> <p>The Documentation of Compliance and the Notification of Compliance must contain operating requirements including, but not limited to, the operating requirements in 40 CFR 63.1206 and 40 CFR 63.1209,</p> <p>Failure to comply with the operating requirements is failure to ensure compliance with the emission standards of subpart EEE,</p> <p>Operating requirements in the Notification of Compliance are applicable requirements for purposes of parts 70 and 71 of this chapter;</p> <p>The operating requirements specified in the Notification of Compliance will be incorporated in the title V permit.</p>	<p>40 CFR 63.1206(c)(1)</p>
<p>Startup, Shutdown, and Malfunction Plan: The Permittee is subject to the startup, shutdown, and malfunction plan requirements of 40 CFR 63.6(e)(3).</p>	<p>40 CFR 63.1206(c)(2)(i)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(SUBMITTAL)</p> <p>If the Permittee elects to comply with 40 CFR 270.235(a)(1)(iii), 270.235(a)(2)(iii), or 270.235(b)(1)(ii) to address RCRA concerns to minimize emissions of toxic compounds from startup, shutdown, and malfunction events (including releases from emergency safety vents), then:</p> <p>The startup, shutdown, and malfunction plan must include a description of potential causes of malfunctions, including releases from emergency safety vents, that may result in significant releases of hazardous air pollutants, and actions the source is taking to minimize the frequency and severity of those malfunctions; and</p> <p>Submit the startup, shutdown, and malfunction plan to the Administrator for review and approval.</p> <p>(continued below)</p>	<p>40 CFR 63.1206(c)(2)(ii)</p>
<p>(continued)</p> <p>(SUBMITTAL)</p> <p>Approval procedure. The Administrator will notify the Permittee of approval or intention to deny approval of the startup, shutdown, and malfunction plan within 90 calendar days after receipt of the original request and within 60 calendar days after receipt of any supplemental information submitted. Before disapproving the plan, the Administrator will notify the Permittee of the Administrator's intention to disapprove the plan together with:</p> <ul style="list-style-type: none"> <li>- Notice of the information and findings on which intended disapproval is based; and</li> <li>- Notice of opportunity for the Permittee to present additional information to the Administrator before final action on disapproval of the plan. At the time the Administrator notifies the Permittee of intention to disapprove the plan, the Administrator will specify how much time the Permittee will have after being notified on the intended disapproval to submit additional information.</li> </ul> <p>(continued below)</p>	<p>40 CFR 63.1206(c)(2)(ii) (continued)</p>
<p>(continued)</p> <p>(NOTIFICATION)</p> <p>Responsibility of owners and operators. The Permittee is responsible for ensuring that any supplementary and additional information supporting the plan is submitted in a timely manner to enable the Administrator to consider whether to approve the plan. Neither the submittal of the plan, nor the Administrator's failure to approve or disapprove the plan, relieves the Permittee of the responsibility to comply with the provisions of this subpart.</p> <p>Changes to the plan that may significantly increase emissions. The Permittee must request approval in writing from the Administrator within 5 days after making a change to the startup, shutdown, and malfunction plan that may significantly increase emissions of hazardous air pollutants.</p> <p>To request approval of such changes to the startup, shutdown, and malfunction plan, the Permittee must follow the procedures provided by 40 CFR 63.1206(c)(2)(ii)(B) for initial approval of the plan.</p>	<p>40 CFR 63.1206(c)(2)(ii) (continued)</p>
<p>The Permittee must identify in the Startup, Shutdown, and Malfunction Plan a projected oxygen correction factor based on normal operations to use during periods of startup and shutdown.</p>	<p>40 CFR 63.1206(c)(2)(iii)</p>
<p>The Permittee must record the Startup, Shutdown, and Malfunction Plan in the operating record.</p>	<p>40 CFR 63.1206(c)(2)(iv)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(RECORDKEEPING)</p> <p>During malfunctions, the automatic waste feed cutoff requirements of 40 CFR 63.1206(c)(3) continue to apply, except for 40 CFR 63.1206(c)(3)(v) and (c)(3)(vi). If the Permittee exceeds a Subpart EEE emission standard monitored by a CEMS or COMs or operating limit specified under 40 CFR 63.1209, the automatic waste feed cutoff system must immediately and automatically cutoff the hazardous waste feed, except as provided by 40 CFR 63.1206(c)(3)(viii). If the malfunction itself prevents immediate and automatic cutoff of the hazardous waste feed, cease feeding hazardous waste as soon as possible.</p> <p>Although the automatic waste feed cutoff requirements continue to apply during a malfunction, an exceedance of an emission standard monitored by a CEMS or COMS or operating limit specified under 63.1209 is not a violation of this subpart if the Permittee takes the corrective measures prescribed in the Startup, Shutdown, and Malfunction Plan.</p> <p>(continued below)</p>	<p>40 CFR 63.1206(c)(2)(v)(A)</p>
<p>(continued)</p> <p>For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, the Permittee must:</p> <ul style="list-style-type: none"> <li>- Within 45 days of the 10th exceedance, complete an investigation of the cause of each exceedance and evaluation of approaches to minimize the frequency, duration, and severity of each exceedance, and revise the Startup, Shutdown, and Malfunction Plan as warranted by the evaluation to minimize the frequency, duration, and severity of each exceedance; and</li> <li>- Record the results of the investigation and evaluation in the operating record, and include a summary of the investigation and evaluation, and any changes to the Startup, Shutdown, and Malfunction Plan, in the excess emissions report required under 40 CFR 63.10(e)(3).</li> </ul>	<p>40 CFR 63.1206(c)(2)(v)(A) (continued)</p>
<p>Automatic waste feed cutoff (AWFCO): Upon the compliance date, the Permittee must operate the hazardous waste combustor with a functioning system that immediately and automatically cuts off the hazardous waste feed, except as provided by 40 CFR 63.1206(c)(3)(viii):</p> <p>When any of the following are exceeded: Operating parameter limits specified under 40 CFR 63.1209; an emission standard monitored by a CEMS; and the allowable combustion chamber pressure;</p> <p>When the span value of any CMS detector, except a CEMS, is met or exceeded;</p> <p>Upon malfunction of a CMS monitoring an operating parameter limit specified under 40 CFR 63.1209 or an emission level; or</p> <p>When any component of the automatic waste feed cutoff system fails.</p>	<p>40 CFR 63.1206(c)(3)(i)</p>
<p>Ducting of Combustion Gases: During an AWFCO, the Permittee must continue to duct combustion gases to the air pollution control system while hazardous waste remains in the combustion chamber (i.e., if the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated).</p>	<p>40 CFR 63.1206(c)(3)(ii)</p>
<p>Restarting Waste Feed: The Permittee must continue to monitor during the cutoff the operating parameters for which limits are established under 40 CFR 63.1209 and the emissions required under that section to be monitored by a CEMS, and the Permittee must not restart the hazardous waste feed until the operating parameters and emission levels are within the specified limits.</p>	<p>40 CFR 63.1206(c)(3)(iii)</p>
<p>Failure of the AWFCO System: If the AWFCO system fails to automatically and immediately cutoff the flow of hazardous waste upon exceedance of a parameter required to be interlocked with the AWFCO system under 40 CFR 63.1206(c)(3)(i), the Permittee has failed to comply with the AWFCO requirements of 40 CFR 63.1206(c)(3).</p>	<p>40 CFR 63.1206(c)(3)(iv)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(RECORDKEEPING)</p> <p>Corrective Measures: If, after any AWFCO, there is an exceedance of an emission standard or operating requirement, irrespective of whether the exceedance occurred while hazardous waste remained in the combustion chamber (i.e., whether the hazardous waste residence time has transpired since the hazardous waste feed cutoff system was activated), the Permittee must investigate the cause of the AWFCO, take appropriate corrective measures to minimize future AWFCOs, and record the findings and corrective measures in the operating record.</p>	<p>40 CFR 63.1206(c)(3)(v)</p>
<p>(REPORTING)</p> <p>Excessive Exceedance Reporting: For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, the Permittee must submit to the Administrator a written report within 5 calendar days of the 10th exceedance documenting the exceedances and results of the investigation and corrective measures taken.</p> <p>On a case-by-case basis, the Administrator may require excessive exceedance reporting when fewer than 10 exceedances occur during a 60-day block period.</p>	<p>40 CFR 63.1206(c)(3)(vi)</p>
<p>(RECORDKEEPING)</p> <p>Testing: The AWFCO system and associated alarms must be tested at least weekly to verify operability, unless the Permittee documents in the operating record that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, the Permittee must conduct operability testing at least monthly. The Permittee must document and record in the operating record AWFCO operability test procedures and results.</p>	<p>40 CFR 63.1206(c)(3)(vii)</p>
<p>(RECORDKEEPING)</p> <p>Ramping Down Waste Feed: The Permittee may ramp down the waste feedrate of pumpable hazardous waste over a period not to exceed one minute, except as provided by 40 CFR 63.1206(c)(3)(viii)(B). If the Permittee ramps down the waste feed, document ramp down procedures in the Operating and Maintenance Plan. The procedures must specify that the ramp down begins immediately upon initiation of AWFCO and the procedures must prescribe a bona fide ramping down. If an emission standard or operating limit is exceeded during the ramp down, the Permittee failed to comply with the emission standards or operating requirements of subpart EEE.</p> <p>If the automatic waste feed cutoff is triggered by an exceedance of any of the following operating limits, the Permittee may not ramp down the waste feed cutoff: minimum combustion chamber temperature, maximum hazardous waste feedrate, or any hazardous waste firing system operating limits that may be established for the combustor.</p>	<p>40 CFR 63.1206(c)(3)(viii)</p>
<p>(RECORDKEEPING)</p> <p>Failure to Meet Standards: If an emergency safety vent (ESV) opens when hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not expired) during an event other than a malfunction as defined in the Startup, Shutdown, and Malfunction Plan such that combustion gases are not treated as during the most recent comprehensive performance test (e.g., if the combustion gas by-passes any emission control device that was operating during the performance test), the Permittee must document in the operating record whether the unit remains in compliance with the emission standards of this subpart considering emissions during the ESV opening event.</p>	<p>40 CFR 63.1206(c)(4)(i)</p>
<p>(RECORDKEEPING)</p> <p>ESV Operating Plan. The Permittee must develop an ESV Operating Plan, comply with the operating plan, and keep the plan in the operating record.</p> <p>The ESV operating plan must provide detailed procedures for rapidly stopping the waste feed, shutting down the combustor, and maintaining temperature and negative pressure in the combustion chamber during the hazardous waste residence time, if feasible. The plan must include calculations and information and data documenting the effectiveness of the plan's procedures for ensuring that combustion chamber temperature and negative pressure are maintained as is reasonably feasible.</p>	<p>40 CFR 63.1206(c)(4)(ii)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(RECORDKEEPING)</p> <p>Corrective Measures: After any ESV opening that results in a failure to meet the emission standards as defined in 40 CFR 63.1206(c)(4)(i), the Permittee must investigate the cause of the ESV opening, take appropriate corrective measures to minimize such future ESV openings, and record the findings and corrective measures in the operating record.</p>	<p>40 CFR 63.1206(c)(4)(iii)</p>
<p>(REPORTING)</p> <p>Reporting Requirements: The Permittee must submit to the Administrator a written report within 5 days of an ESV opening that results in failure to meet the emission standards of subpart EEE (as determined in 40 CFR 63.1206(c)(4)(i)) documenting the result of the investigation and corrective measures taken.</p>	<p>40 CFR 63.1206(c)(4)(iv)</p>
<p>(REQUEST/RECORDKEEPING)</p> <p>Combustion System Leaks: Combustion system leaks of hazardous air pollutants must be controlled by:</p> <ul style="list-style-type: none"> <li>- Keeping the combustion zone sealed to prevent combustion system leaks; or</li> <li>- Maintaining the maximum combustion zone pressure lower than ambient pressure using an instantaneous monitor; or</li> <li>- Upon prior written approval of the Administrator, an alternative means of control to provide control of combustion system leaks equivalent to maintenance of combustion zone pressure lower than ambient pressure; or</li> <li>- Upon prior written approval of the Administrator, other technique(s) which can be demonstrated to prevent fugitive emissions without use of instantaneous pressure limits; and</li> </ul> <p>(continued below)</p>	<p>40 CFR 63.1206(c)(5)</p>
<p>(continued)</p> <p>(REQUEST/RECORDKEEPING)</p> <p>The Permittee must specify in the performance test workplan and Notification of Compliance the method that will be used to control combustion system leaks. If the Permittee controls combustion system leaks by maintaining the combustion zone pressure lower than ambient pressure using an instantaneous monitor, the Permittee must also specify in the performance test workplan and Notification of Compliance the monitoring and recording frequency of the pressure monitor, and specify how the monitoring approach will be integrated into the AWFCO system.</p>	<p>40 CFR 63.1206(c)(5) (continued)</p>
<p>(RECORDKEEPING)</p> <p>Operator Training and Certification: Establish training programs for all personnel whose activities may reasonably be expected to directly affect emissions of HAPs from the source. Such persons include, but are not limited to, chief facility operators, control room operators, continuous monitoring system operators, persons that sample and analyze feedstreams, persons that manage and charge feedstreams to the combustor, persons that operate emission control devices, and ash and waste handlers. Each training program shall be of a technical level commensurate with the person's job duties specified in the training manual.</p> <p>Each commensurate training program shall require an examination to be administered by the instructor at the end of the training course. Passing of this test shall be deemed the "certification" for personnel, except that, for control room operators, the training and certification program shall be as specified in 40 CFR 63.1206(c)(6)(iii) and (vi).</p>	<p>40 CFR 63.1206(c)(6)(i)</p>
<p>The Permittee must ensure that the source is operated and maintained at all times by persons who are trained and certified to perform these and any other duties that may affect emissions of hazardous air pollutants. A certified control room operator must be on duty at the site at all times the source is in operation.</p>	<p>40 CFR 63.1206(c)(6)(ii)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Control room operators must be trained and certified under a site-specific, source-developed and implemented program that meets the requirements of 40 CFR 63.1206(c)(6)(v); or be trained under the requirements of, and certified under, the ASME Standard Number QHO-1-1994 and QHO-1a-1996 Addenda (40 CFR 63.14(e)). If the Permittee chooses to use the ASME program:</p> <ul style="list-style-type: none"> <li>- Control room operators must, prior to the compliance date, achieve provisional certification, and must submit an application to ASME and be scheduled for the full certification exam. Within one year of the compliance date, control room operators must achieve full certification;</li> <li>- New operators and operators of new sources must, before assuming their duties, achieve provisional certification, and must submit an application to ASME, and be scheduled for the full certification exam. Within one year of assuming their duties, these operators must achieve full certification or be trained and certified under a State program.</li> </ul>	<p>40 CFR 63.1206(c)(6)(iii)</p>
<p>Site-specific, source developed and implemented training programs for control room operators must include the following elements:</p> <p>Training on the following subjects:</p> <ul style="list-style-type: none"> <li>- Environmental concerns, including types of emissions;</li> <li>- Basic combustion principles, including products of combustion;</li> <li>- Operation of the specific type of combustor used by the operator, including proper startup, waste firing, and shutdown procedures;</li> <li>- Combustion controls and continuous monitoring systems;</li> <li>- Operation of air pollution control equipment and factors affecting performance;</li> <li>- Inspection and maintenance of the combustor, continuous monitoring systems, and air pollution control devices;</li> <li>- Actions to correct malfunctions or conditions that may lead to malfunction;</li> <li>-Residue characteristics and handling procedures;</li> <li>- Applicable Federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards; and</li> </ul> <p>(continued below)</p>	<p>40 CFR 63.1206(c)(6)(v)</p>
<p>(continued)</p> <p>An examination designed and administered by the instructor; and</p> <p>Written material covering the training course topics that may serve as reference material following completion of the course.</p>	<p>40 CFR 63.1206(c)(6)(v) (continued)</p>
<p>To maintain control room operator qualification under a site-specific, source developed and implemented training program as provided by 40 CFR 63.1206(c)(6)(v), control room operators must complete an annual review or refresher course covering, at a minimum, the following topics:</p> <ul style="list-style-type: none"> <li>- Update of regulations;</li> <li>- Combustor operation, including startup and shutdown procedures, waste firing, and residue handling;</li> <li>- Inspection and maintenance;</li> <li>- Responses to malfunctions or conditions that may lead to malfunction; and</li> <li>- Operating problems encountered by the operator.</li> </ul>	<p>40 CFR 63.1206(c)(6)(vi)</p>
<p>(RECORDKEEPING)</p> <p>The Permittee must record the operator training and certification program in the operating record.</p>	<p>40 CFR 63.1206(c)(6)(vii)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(RECORDKEEPING)</p> <p>Operation and Maintenance Plan, General; The Permittee must prepare and at all times operate according to an Operation and Maintenance Plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the combustor, including associated pollution control equipment, that could affect emissions of regulated hazardous air pollutants.</p> <p>The plan must prescribe how the Permittee will operate and maintain the combustor in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test.</p> <p>This plan ensures compliance with the operation and maintenance requirements of 40 CFR 63.6(e) and minimizes emissions of pollutants, automatic waste feed cutoffs, and malfunctions.</p> <p>The Permittee must record the plan in the operating record.</p>	<p>40 CFR 63.1206(c)(7)(i)</p>
<p>PERFORMANCE TESTS</p>	<p>hdr</p>
<p>Types of Performance Tests</p>	<p>hdr</p>
<p>General. The provisions of 40 CFR 63.7 apply, except as provided in 40 CFR 63.1207</p>	<p>40 CFR 63.1207(a)</p>
<p>Comprehensive performance test. The Permittee must conduct comprehensive performance tests to demonstrate compliance with the emission standards provided by 40 CFR 63.1203, 63.1204, and 63.1205, establish limits for the operating parameters provided by 40 CFR 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems.</p>	<p>40 CFR 63.1207(b)(1)</p>
<p>Confirmatory performance test. The Permittee must conduct confirmatory performance tests to:</p> <p>Demonstrate compliance with the dioxin/furan emission standard when the source operates under normal operating conditions; and</p> <p>Conduct a performance evaluation of continuous monitoring systems required for compliance assurance with the dioxin/furan emission standard under 40 CFR 63.1209(k).</p>	<p>40 CFR 63.1207(b)(2)</p>
<p>Initial Comprehensive Performance Test</p>	<p>hdr</p>
<p>The Comprehensive Performance Test (CPT) has been completed. The CPT plan was approved towards the end of August, 2004 and the test was run on August 31st and September 1st and 2nd, 2004.</p>	<p>40 CFR 63.1207(c)</p>
<p>Frequency of Testing</p>	<p>hdr</p>
<p>Except as otherwise specified in 40 CFR 63.1207(d)(4), the Permittee must conduct testing periodically as prescribed in 40 CFR 63.1207(d)(1) through (d)(3). The date of commencement of the initial comprehensive performance test is the basis for establishing the deadline to commence the initial confirmatory performance test and the next comprehensive performance test. The Permittee may conduct performance testing at any time prior to the required date. The deadline for commencing subsequent confirmatory and comprehensive performance testing is based on the date of commencement of the previous comprehensive performance test. Unless the Administrator grants a time extension under 40 CFR 63.1207(i), conduct testing as described below.</p>	<p>40 CFR 63.1207(d)</p>
<p>Comprehensive performance testing. Except as otherwise specified in 40 CFR 63.1207(d)(4), the Permittee must commence testing no later than 61 months after the date of commencing the previous comprehensive performance test. If the Permittee submits data in lieu of the initial performance test, commence the subsequent comprehensive performance test within 61 months of commencing the test used to provide the data in lieu of the initial performance test.</p>	<p>40 CFR 63.1207(d)(1)</p>
<p>Confirmatory performance testing. Except as otherwise specified in 40 CFR 63.1207(d)(4), the Permittee must commence confirmatory performance testing no later than 31 months after the date of commencing the previous comprehensive performance test. If you submit data in lieu of the initial performance test, you must commence the initial confirmatory performance test within 31 months of the date six months after the compliance date. To ensure that the confirmatory test is conducted approximately midway between comprehensive performance tests, the Administrator will not approve a test plan that schedules testing within 18 months of commencing the previous comprehensive performance test.</p>	<p>40 CFR 63.1207(d)(2)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(REQUEST)</p> <p>Duration of testing. The Permittee must complete performance testing within 60 days after the date of commencement, unless the Administrator determines that a time extension is warranted based on the Permittee's documentation in writing of factors beyond the Permittee's control that prevents the Permittee from meeting the 60-day deadline.</p>	<p>40 CFR 63.1207(d)(3)</p>
<p>Applicable testing requirements under the interim standards. Waiver of periodic comprehensive performance tests. Except as provided by 40 CFR 63.1207(c)(2), the Permittee must conduct only an initial comprehensive performance test under the interim standards (i.e., the standards published in the Federal Register on February 13, 2002; all subsequent comprehensive performance testing requirements are waived under the interim standards. The provisions in the introductory text to 40 CFR 63.1207(d) and (d)(1) do not apply until EPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in the Federal Register on November 16, 2001.</p>	<p>40 CFR 63.1207(d)(4)(i)</p>
<p>Waiver of confirmatory performance tests. The Permittee is not required to conduct a confirmatory test under the interim standards (i.e., the standards published in the Federal Register on February 13, 2002. The confirmatory testing requirements in the introductory text to 40 CFR 63.1207(d) and (d)(2) are waived until EPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in the Federal Register on November 16, 2001.</p>	<p>40 CFR 63.1207(d)(4)(ii)</p>
<p>Notification of Performance Test and CMS Performance Evaluation, and Approval of Test Plan and CMS Performance Evaluation Plan</p>	<p>hdr</p>
<p>(NOTIFICATION)</p> <p>Comprehensive performance test. The Permittee must submit to the Administrator a notification of the intention to conduct a comprehensive performance test and CMS performance evaluation and a site-specific test plan and CMS performance evaluation test plan at least one year before the performance test and performance evaluation are scheduled to begin.</p> <p>The Administrator will notify the Permittee of approval or intent to deny approval of the site-specific test plan and CMS performance evaluation test plan within 9 months after receipt of the original plan.</p> <p>The Permittee must submit to the Administrator a notification of the intention to conduct the comprehensive performance test at least 60 calendar days before the test is scheduled to begin.</p>	<p>40 CFR 63.1207(e)(1)(i)</p>
<p>(NOTIFICATION)</p> <p>Confirmatory performance test. The Permittee must submit to the Administrator a notification of intention to conduct a confirmatory performance test and CMS performance evaluation and a site-specific test plan and CMS performance evaluation test plan at least 60 calendar days before the performance test is scheduled to begin. The Administrator will notify the Permittee of approval or intent to deny approval of the site-specific test plan and CMS performance evaluation test plan within 30 calendar days after receipt of the original test plans.</p>	<p>40 CFR 63.1207(e)(1)(ii)</p>
<p>After the Administrator has approved the site-specific test plan and CMS performance evaluation test plan, the Permittee must make the test plans available to the public for review. The Permittee must issue a public notice announcing the approval of the test plans and the location where the test plans are available for review.</p>	<p>40 CFR 63.1207(e)(2)</p>
<p>(REQUEST/PETITION)</p> <p>Petitions for time extension if Administrator fails to approve or deny test plans. The Permittee may petition the Administrator under 40 CFR 63.7(h) to obtain a "waiver" of any performance test -- initial or periodic performance test; comprehensive or confirmatory test. The "waiver" would be implemented as an extension of time to conduct the performance test at a later date.</p>	<p>40 CFR 63.1207(e)(3)</p>
<p>Qualifications for the waiver. The Permittee may not petition the Administrator for a waiver under this section if the Administrator has issued a notification of intent to deny the test plan(s) under 40 CFR 63.7(c)(3)(i)(B). The Permittee must submit a site-specific emissions testing plan and a continuous monitoring system performance evaluation test plan at least one year before a comprehensive performance test is scheduled to begin as required by 40 CFR 63.1207(c)(1), or at least 60 days before a confirmatory performance test is scheduled to begin as required by 40 CFR 63.1207(d). The test plans must include all required documentation, including the substantive content requirements of 40 CFR 63.1207(f) and 40 CFR 63.8(e); and the Permittee must make a good faith effort to accommodate the Administrator's comments on the test plans.</p>	<p>40 CFR 63.1207(e)(3)(i)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Procedures for obtaining a waiver and duration of the waiver: The Permittee must submit to the Administrator a waiver petition or request to renew the petition under 40 CFR 63.7(h) separately for each source at least 60 days prior to the scheduled date of the performance test. The Administrator will approve or deny the petition within 30 days of receipt and notify you promptly of the decision. The Administrator will not approve an individual waiver petition for a duration exceeding 6 months. The Administrator will include a sunset provision in the waiver ending the waiver within 6 months. The Permittee may submit a revised petition to renew the waiver under 40 CFR 63.7(h)(3)(iii) at least 60 days prior to the end date of the most recently approved waiver petition. The Administrator may approve a revised petition for a total waiver period up to 12 months.</p>	<p>40 CFR 63.1207(e)(3)(ii)</p>
<p>Content of the waiver. The Permittee must provide documentation to enable the Administrator to determine that the source is meeting the relevant standard(s) on a continuous basis as required by 40 CFR 63.7(h)(2). For extension requests for the initial comprehensive performance test, submit your Documentation of Compliance to assist the Administrator in making this determination.</p> <p>The Permittee must include in the petition information justifying the request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test, as required by 40 CFR 63.7(h)(3)(iii).</p>	<p>40 CFR 63.1207(e)(3)(iii)</p>
<p>(NOTIFICATION)</p> <p>Public notice. The Permittee must notify the public (e.g., distribute public mailing list) of the petition to waive a performance test.</p>	<p>40 CFR 63.1207(e)(3)(iv)</p>
<p>Content of Performance Test Plan</p>	<p>hdr</p>
<p>The provisions of 40 CFR 63.7(c)(2)(i)-(iii) and (v) regarding the content of the test plan apply. In addition, the Permittee must include the information provided below in the test plan.</p> <p>Content of comprehensive performance test plan. An analysis of each feedstream, including hazardous waste, other fuels, and industrial furnace feedstocks, as fired, that includes:</p> <ul style="list-style-type: none"> <li>- Heating value, levels of ash (for hazardous waste incinerators only), levels of semivolatile metals, low volatile metals, mercury, and total chlorine (organic and inorganic); and</li> <li>- Viscosity or description of the physical form of the feedstream;</li> </ul>	<p>40 CFR 63.1207(f)(1)(i)</p>
<p>(REQUEST)</p> <p>For organic hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) as provided by 40 CFR 63.60 the following must be included in the test plan:</p> <ul style="list-style-type: none"> <li>- Except as provided by 40 CFR 63.1207(f)(1)(ii)(D), an identification of such organic hazardous air pollutants that are present in each hazardous waste feedstream. The Permittee need not analyze for organic hazardous air pollutants that would reasonably not be expected to be found in the feedstream. The Permittee must identify any constituents excluded from analysis and explain the basis for excluding them. The Permittee must conduct the feedstream analysis according to 40 CFR 63.1208(b)(8);</li> <li>- An approximate quantification of such identified organic hazardous air pollutants in the hazardous waste feedstreams, within the precision produced by analytical procedures of 40 CFR 63.1208(b)(8); and</li> </ul> <p>(continued below)</p>	<p>40 CFR 63.1207(f)(1)(ii)</p>
<p>(REQUEST)</p> <p>(continued)</p> <ul style="list-style-type: none"> <li>- A description of blending procedures, if applicable, prior to firing the hazardous waste feedstream, including a detailed analysis of the materials prior to blending, and blending ratios.</li> <li>- The Administrator may approve on a case-by-case basis a hazardous waste feedstream analysis for organic hazardous air pollutants in lieu of the analysis required under 40 CFR 63.1207(f)(1)(ii)(A) if the reduced analysis is sufficient to ensure that the POHCs used to demonstrate compliance with the applicable DRE standard of 40 CFR 63.1203, 63.1204, or 63.1205, continue to be representative of the organic hazardous air pollutants in your hazardous waste feedstreams.</li> </ul>	<p>40 CFR 63.1207(f)(1)(ii)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>A detailed engineering description of the hazardous waste combustor must be included in the test plan, including:</p> <ul style="list-style-type: none"> <li>- Manufacturer's name and model number of the hazardous waste combustor;</li> <li>- Type of hazardous waste combustor;</li> <li>- Maximum design capacity in appropriate units;</li> <li>- Description of the feed system for each feedstream;</li> <li>- Capacity of each feed system;</li> <li>- Description of automatic hazardous waste feed cutoff system(s);</li> <li>- Description of the design, operation, and maintenance practices for any air pollution control system; and</li> <li>- Description of the design, operation, and maintenance practices of any stack gas monitoring and pollution control monitoring systems;</li> </ul>	<p>40 CFR 63.1207(f)(1)(iii)</p>
<p>A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis must be included in the test plan.</p>	<p>40 CFR 63.1207(f)(1)(iv)</p>
<p>A detailed test schedule for each hazardous waste for which the performance test is planned, including date(s), duration, quantity of hazardous waste to be burned, and other relevant factors must be included in the test plan.</p>	<p>40 CFR 63.1207(f)(1)(v)</p>
<p>A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feedrate for each feed system, and, as appropriate, the feedrates of other fuels and feedstocks, and any other relevant parameters that may affect the ability of the hazardous waste combustor to meet the emission standards must be included in the test plan.</p>	<p>40 CFR 63.1207(f)(1)(vi)</p>
<p>A description of, and planned operating conditions for, any emission control equipment that will be used must be included in the test plan.</p>	<p>40 CFR 63.1207(f)(1)(vii)</p>
<p>Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction must be included in the test plan.</p>	<p>40 CFR 63.1207(f)(1)(viii)</p>
<p>A determination of the hazardous waste residence time as required by 40 CFR 63.1206(b)(11) must be included in the test plan.</p>	<p>40 CFR 63.1207(f)(1)(ix)</p>
<p>If the Permittee is requesting to extrapolate metal feedrate limits from comprehensive performance test levels under 40 CFR 63.1209(l)(1)(i) or 40 CFR 63.1209(n)(2)(ii)(A) the following must be included in the test plan:</p> <ul style="list-style-type: none"> <li>- A description of the extrapolation methodology and rationale for how the approach ensures compliance with the emission standards;</li> <li>- Documentation of the historical range of normal (i.e., other than during compliance testing) metals feedrates for each feedstream;</li> <li>- Documentation that the level of spiking recommended during the performance test will mask sampling and analysis imprecision and inaccuracy to the extent that the extrapolated feedrate limits adequately assure compliance with the emission standards</li> </ul>	<p>40 CFR 63.1207(f)(1)(x)</p>
<p>If the Permittee does not continuously monitor regulated constituents in natural gas, process air feedstreams, and feedstreams from vapor recovery systems under 40 CFR 63.1209(c)(5), the Permittee must include documentation of the expected levels of regulated constituents in those feedstreams in the test plan.</p>	<p>40 CFR 63.1207(f)(1)(xi)</p>
<p>Documentation justifying the duration of system conditioning required to ensure the combustor has achieved steady-state operations under performance test operating conditions, as provided by 40 CFR 63.1207(g)(1)(iii) must be included in the test plan.</p>	<p>40 CFR 63.1207(f)(1)(xii)</p>
<p>If the Permittee is not required to conduct performance testing to document compliance with the mercury, semivolatile metal, low volatile metal, or hydrochloric acid/chlorine gas emission standards under 40 CFR 63.1207(m), the Permittee must include with the comprehensive performance test plan documentation of compliance with the provisions of that section.</p>	<p>40 CFR 63.1207(f)(1)(xvi)</p>
<p>If the Permittee proposes to use a surrogate for measuring or monitoring gas flowrate, the Permittee must document in the comprehensive performance test plan that the surrogate adequately correlates with gas flowrate, as required by 40 CFR 63.1207(m)(7), and 40 CFR 63.1209(j)(2), (k)(3), (m)(2)(i), (n)(5)(i), and (o)(2)(i).</p>	<p>40 CFR 63.1207(f)(1)(xvii)</p>
<p>The Permittee must submit an application to request alternative monitoring under 40 CFR 63.1209(g)(1) not later than with the comprehensive performance test plan, as required by 40 CFR 63.1209(g)(1)(iii)(A).</p>	<p>40 CFR 63.1207(f)(1)(xviii)</p>
<p>The Permittee must document the temperature location measurement in the comprehensive performance test plan, as required by 40 CFR 63.1209(j)(1)(i) and 40 CFR 63.1209(k)(2)(i).</p>	<p>40 CFR 63.1207(f)(1)(xix)</p>
<p>If the source is equipped with a wet scrubber and the Permittee elects to monitor solids content of the scrubber liquid manually but believes that hourly monitoring of solids content is not warranted, the Permittee must support an alternative monitoring frequency in the comprehensive performance test plan, as required by 40 CFR 63.1209(m)(1)(i)(B)(1)(i).</p>	<p>40 CFR 63.1207(f)(1)(xxiii)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

For purposes of calculating semivolatile metal, low volatile metal, mercury, and total chlorine (organic and inorganic), and ash feedrate limits, a description of how the Permittee will handle performance test feedstream analytical results that determines these constituents are not present at detectable levels must be included in the test plan.	40 CFR 63.1207(f)(1)(xxvi)
Such other information as the Administrator reasonably finds necessary to determine whether to approve the performance test plan, must be included in the test plan.	40 CFR 63.1207(f)(1)(xxvii)
Content of confirmatory test plan. The following must be included in the confirmatory test plan: - A description of the normal hydrocarbon or carbon monoxide operating levels, as specified in 40 CFR 63.1207(g)(2)(i), and an explanation of how these normal levels were determined; - A description of the normal applicable operating parameter levels, as specified in 40 CFR 63.1207(g)(2)(ii), and an explanation of how these normal levels were determined; - A description of the normal chlorine operating levels, as specified in 40 CFR 63.1207(g)(2)(iii), and an explanation of how these normal levels were determined; - A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis;	40 CFR 63.1207(f)(2)
(continued below)	
(continued)  - A detailed test schedule for each hazardous waste for which the performance test is planned, including date(s), duration, quantity of hazardous waste to be burned, and other relevant factors; - A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feedrate for each feed system, and, as appropriate, the feedrates of other fuels and feedstocks, and any other relevant parameters that may affect the ability of the hazardous waste combustor to meet the dioxin/furan emission standard; - A description of, and planned operating conditions for, any emission control equipment that will be used; - Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction; and - Such other information as the Administrator reasonably finds necessary to determine whether to approve the confirmatory test plan.	40 CFR 63.1207(f)(2)
Operating Conditions During Testing	hdr
The Permittee must comply with the provisions of 40 CFR 63.7(e). Conducting performance testing under operating conditions representative of the extreme range of normal conditions is consistent with the requirement of 40 CFR 63.7(e)(1) to conduct performance testing under representative operating conditions.	40 CFR 63.1207(g)
Comprehensive performance testing - Operations during testing. For the following parameters, the Permittee must operate the combustor during the performance test under normal conditions (or conditions that will result in higher than normal emissions): - Chlorine feedrate. The Permittee must feed normal (or higher) levels of chlorine during the dioxin/furan performance test; - Ash feedrate. For hazardous waste incinerators, the Permittee must conduct the semivolatile metal and low volatile metal performance tests when feeding normal (or higher) levels of ash; and - Cleaning cycle of the particulate matter control device. The Permittee must conduct the particulate matter, semivolatile metal, and low volatile metal performance tests when the particulate matter control device undergoes its normal (or more frequent) cleaning cycle.	40 CFR 63.1207(g)(1)(i)
Modes of operation. Given that the Permittee must establish limits for the applicable operating parameters specified in 40 CFR 63.1209 based on operations during the comprehensive performance test, the Permittee may conduct testing under two or more operating modes to provide operating flexibility.	40 CFR 63.1207(g)(1)(ii)
Steady-state conditions. Prior to obtaining performance test data, the Permittee must operate under performance test conditions until steady-state operations are reached with respect to emissions of pollutants to be measured during the performance test and operating parameters under 40 CFR 63.1209 for which the Permittee must establish limits. During system conditioning, the Permittee must ensure that each operating parameter for which the Permittee must establish a limit is held at the level planned for the performance test. The Permittee must include documentation in the performance test plan under 40 CFR 63.1207(f) justifying the duration of system conditioning.	40 CFR 63.1207(g)(1)(iii)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Confirmatory performance testing. The Permittee must conduct confirmatory performance testing for dioxin/furan under normal operating conditions for the following parameters:                  - Carbon monoxide (or hydrocarbon) CEMS emissions levels must be within the range of the average value to the maximum value allowed, except as provided by 40 CFR 63.1207(g)(2)(iv). The average value is defined as the sum of the hourly rolling average values recorded (each minute) over the previous 12 months, divided by the number of rolling averages recorded during that time. The average value must not include calibration data, startup data, shutdown data, malfunction data, and data obtained when not burning hazardous waste;</p> <p>(continued below)</p>	<p>40 CFR 63.1207(g)(2)</p>
<p>(continued)</p> <p>- Each operating limit (specified in 40 CFR 63.1209) established to maintain compliance with the dioxin/furan emission standard must be held within the range of the average value over the previous 12 months and the maximum or minimum, as appropriate, that is allowed, except as provided by 40 CFR 63.1207(g)(2)(iv). The average value is defined as the sum of the rolling average values recorded over the previous 12 months, divided by the number of rolling averages recorded during that time. The average value must not include calibration data, startup data, shutdown data, malfunction data, and data obtained when not burning hazardous waste;                  - The Permittee must feed chlorine at normal feedrates or greater; and</p> <p>(continued below)</p>	<p>40 CFR 63.1207(g)(2)</p>
<p>(REQUEST)</p> <p>(continued)</p> <p>- The Administrator may approve an alternative range to that required by 40 CFR 63.1207(g)(2)(i) and (ii) if the Permittee documents in the confirmatory performance test plan that it may be problematic to maintain the required range during the test. In addition, when making the finding of compliance, the Administrator may consider test conditions outside of the range specified in the test plan based on a finding that the Permittee could not reasonably maintain the range specified in the test plan and considering factors including whether the time duration and level of the parameter when operations were out of the specified range were such that operations during the confirmatory test are determined to be reasonably representative of normal operations. In addition, the Administrator will consider the proximity of the emission test results to the standard.</p>	<p>40 CFR 63.1207(g)(2)</p>
<p>Operating Conditions During Subsequent Testing</p>	<p>hdr</p>
<p>(REQUEST)</p> <p>Current operating parameter limits established under 40 CFR 63.1209 are waived during subsequent comprehensive performance testing.</p> <p>Current operating parameter limits are also waived during pretesting prior to comprehensive performance testing for an aggregate time not to exceed 720 hours of operation (renewable at the discretion of the Administrator) under an approved test plan or if the source records the results of the pretesting. Pretesting means:                  - Operations when stack emissions testing for dioxin/furan, mercury, semivolatile metals, low volatile metals, particulate matter, or hydrochloric acid/chlorine gas is being performed; and                  - Operations to reach steady-state operating conditions prior to stack emissions testing under 40 CFR 63.1207(g)(1)(iii).</p>	<p>40 CFR 63.1207(h)</p>
<p>Time Extension for Subsequent Performance Tests</p>	<p>hdr</p>
<p>(REQUEST)</p> <p>After the initial comprehensive performance test, The Permittee may request up to a one-year time extension for conducting a comprehensive or confirmatory performance test to consolidate performance testing with other state or federally required emission testing, or for other reasons deemed acceptable by the Administrator. If the Administrator grants a time extension for a comprehensive performance test, the deadlines for commencing the next comprehensive and confirmatory tests are based on the date that the subject comprehensive performance test commences.</p>	<p>40 CFR 63.1207(i)</p>
<p>The Permittee must submit in writing to the Administrator any request under 40 CFR 63.1207(i) for a time extension for conducting a performance test.</p>	<p>40 CFR 63.1207(i)(1)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>The Permittee must include in the request for an extension for conducting a performance test the following:</p> <ul style="list-style-type: none"> <li>- A description of the reasons for requesting the time extension;</li> <li>- The date by which the Permittee will commence performance testing.</li> </ul>	<p>40 CFR 63.1207(i)(2)</p>
<p>The Administrator will notify the Permittee in writing of approval or intention to deny approval of the Permittee's request for an extension for conducting a performance test within 30 calendar days after receipt of sufficient information to evaluate the request. The 30-day approval or denial period will begin after the Permittee has been notified in writing that the application is complete. The Administrator will notify the Permittee in writing 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.</p>	<p>40 CFR 63.1207(i)(3)</p>
<p>When notifying the Permittee that the application is not complete, the Administrator will specify the information needed to complete the application. The Administrator will also provide notice of opportunity for the Permittee to present, in writing, within 30 calendar days after notification of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.</p>	<p>40 CFR 63.1207(i)(4)</p>
<p>Before denying any request for an extension for performance testing, the Administrator will notify the Permittee in writing of the Administrator's intention to issue the denial, together with:</p> <ul style="list-style-type: none"> <li>- Notice of the information and findings on which the intended denial is based; and</li> <li>- Notice of opportunity for the Permittee to present in writing, within 15 calendar days after notification of the intended denial, additional information or arguments to the Administrator before further action on the request.</li> </ul>	<p>40 CFR 63.1207(i)(5)</p>
<p>The Administrator's final determination to deny any request for an extension will be in writing and will set forth specific grounds upon which the denial is based. The final determination will be made within 30 calendar days after the 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.</p>	<p>40 CFR 63.1207(i)(6)</p>
<p>Notification of Compliance</p>	<p>hdr</p>
<p>(NOTIFICATION)</p> <p>Comprehensive performance test. Except as provided by 40 CFR 63.1207(j)(4) and (j)(5), within 90 days of completion of a comprehensive performance test, The Permittee must postmark a Notification of Compliance documenting compliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under 40 CFR 63.1209.</p> <p>Upon postmark of the Notification of Compliance, the Permittee must comply with all operating requirements specified in the Notification of Compliance in lieu of the limits specified in the Documentation of Compliance required under 40 CFR 63.1211(c).</p>	<p>40 CFR 63.1207(j)(1)</p>
<p>(NOTIFICATION)</p> <p>Confirmatory performance test. Except as provided by 40 CFR 63.1207(j)(4), within 90 days of completion of a confirmatory performance test, the Permittee must postmark a Notification of Compliance documenting compliance or noncompliance with the applicable dioxin/furan emission standard.</p>	<p>40 CFR 63.1207(j)(2)</p>
<p>(NOTIFICATION)</p> <p>See 40 CFR 63.7(g), 63.9(h), and 63.1210(b) for additional requirements pertaining to the Notification of Compliance (e.g., the Permittee must include results of performance tests in the Notification of Compliance).</p>	<p>40 CFR 63.1207(j)(3)</p>
<p>(REQUEST)</p> <p>Time extension. The Permittee may submit a written request to the Administrator for a time extension documenting that, for reasons beyond the Permittee's control, the Permittee may not be able to meet the 90-day deadline for submitting the Notification of Compliance after completion of testing. The Administrator will determine whether a time extension is warranted.</p>	<p>40 CFR 63.1207(j)(4)</p>
<p>(NOTIFICATION)</p> <p>Early compliance. If the Permittee conducts the initial comprehensive performance test prior to the compliance date, the Permittee must postmark the Notification of Compliance within 90 days of completion of the performance test or by the compliance date, whichever is later.</p>	<p>40 CFR 63.1207(j)(5)</p>
<p>Failure to Submit a Timely Notification of Compliance</p>	<p>hdr</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(NOTIFICATION)</p> <p>Failure to submit a timely Notification of Compliance. If the Permittee fails to postmark a Notification of Compliance by the specified date, the Permittee must cease hazardous waste burning immediately.</p> <p>Prior to submitting a revised Notification of Compliance as provided by 40 CFR 63.1207(k)(3), the Permittee may burn hazardous waste only for the purpose of pretesting or comprehensive performance testing and only for a maximum of 720 hours (renewable at the discretion of the Administrator).</p> <p>The Permittee must submit to the Administrator a Notification of Compliance subsequent to a new comprehensive performance test before resuming hazardous waste burning.</p>	<p>40 CFR 63.1207(k)</p>
<p>Failure of Performance Test</p>	<p>hdr</p>
<p>Comprehensive performance test. If the Permittee determines (based on CEM recordings, results of analyses of stack samples, or results of CMS performance evaluations) that the Permittee has exceeded any emission standard during a comprehensive performance test for a mode of operation, the Permittee must cease hazardous waste burning immediately under that mode of operation. The Permittee must make this determination within 90 days following completion of the performance test.</p>	<p>40 CFR 63.1207(l)(1)(i)</p>
<p>(NOTIFICATION)</p> <p>Comprehensive performance test. If the Permittee has failed to demonstrate compliance with the emission standards for any mode of operation: Prior to submitting a revised Notification of Compliance as provided by 40 CFR 63.1207(l)(1)(ii)(C), the Permittee may burn hazardous waste only for the purpose of pretesting or comprehensive performance testing under revised operating conditions, and only for a maximum of 720 hours (renewable at the discretion of the Administrator), except as provided by 40 CFR 63.1207(l)(3);</p> <p>The Permittee must conduct a comprehensive performance test under revised operating conditions following the requirements for performance testing of this section; and</p> <p>The Permittee must submit to the Administrator a Notification of Compliance subsequent to the new comprehensive performance test.</p>	<p>40 CFR 63.1207(l)(1)(ii)</p>
<p>(NOTIFICATION)</p> <p>Confirmatory performance test. If the dioxin/furan emission standard is exceeded during a confirmatory performance test, cease burning hazardous waste immediately. Make this determination within 90 days of completion of the test. To burn hazardous waste in the future: Submit to the Administrator a test plan to conduct a comprehensive performance test to identify revised limits on the applicable dioxin/furan operating parameters specified in 40 CFR 63.1209(k); Submit to the Administrator a Notification of Compliance with the dioxin/furan emission standard under 40 CFR 63.1207(j), (k) and (l). Include in the Notification the revised limits on the applicable dioxin/furan operating parameters specified in 40 CFR 63.1209(k); and Until the Notification of Compliance is submitted, the Permittee must not burn hazardous waste except for purposes of pretesting or confirmatory performance testing, and for a maximum of 720 hours, except as provided by 40 CFR 63.1207(l)(3).</p>	<p>40 CFR 63.1207(l)(2)</p>
<p>(REQUEST/PETITION)</p> <p>The Permittee may petition the Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. The Permittee must specify operating requirements, including limits on operating parameters, that are determined to ensure compliance with the emission standards of subpart EEE based on available information including data from the failed performance test. The Administrator will review, modify as necessary, and approve if warranted the interim operating requirements. An approval of interim operating requirements will include a schedule for submitting a Notification of Compliance.</p>	<p>40 CFR 63.1207(l)(3)</p>
<p>Waiver of Performance Test</p>	<p>hdr</p>
<p>The waiver provision of 40 CFR 63.1207(m) apply in addition to the provisions of 40 CFR 63.7(h).</p>	<p>40 CFR 63.1207(m)(1)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>The Permittee is not required to conduct performance tests to document compliance with the mercury, semivolatile metal, low volatile metal or hydrochloric acid/chlorine gas emission standards under the conditions specified below. The Permittee is deemed to be in compliance with an emission standard if the twelve-hour rolling average maximum theoretical emission concentration (MTEC) determined as specified below does not exceed the emission standard:</p> <ul style="list-style-type: none"> <li>- Determine the feedrate of mercury, semivolatile metals, low volatile metals, or total chlorine and chloride from all feedstreams;</li> <li>- Determine the stack gas flowrate; and</li> <li>- Calculate a MTEC for each standard assuming all mercury, semivolatile metals, low volatile metals, or total chlorine (organic and inorganic) from all feedstreams is emitted</li> </ul>	<p>40 CFR 63.1207(m)(2)</p>
<p>To document compliance with 40 CFR 63.1207(m), the Permittee must:</p> <ul style="list-style-type: none"> <li>- Monitor and record the feedrate of mercury, semivolatile metals, low volatile metals, and total chlorine and chloride from all feedstreams according to 40 CFR 63.1209(c);</li> <li>- Monitor with a CMS and record in the operating record the gas flowrate (either directly or by monitoring a surrogate parameter correlated to gas flowrate);</li> <li>- Continuously calculate and record in the operating record the maximum theoretical emission concentration (MTEC) under the procedures of 40 CFR 63.1207(m)(2); and</li> <li>- Interlock the MTEC calculated in 40 CFR 63.1207(m)(2)(iii) to the automatic waste feed cut-off (AWFCO) system to stop hazardous waste burning when the MTEC exceeds the emission standard.</li> </ul>	<p>40 CFR 63.1207(m)(3)</p>
<p>In lieu of the requirement in 40 CFR 63.1207(m)(3)(iii) and (iv), The Permittee may:</p> <ul style="list-style-type: none"> <li>- Identify in the Notification of Compliance a minimum gas flowrate limit and a maximum feedrate limit of mercury, semivolatile metals, low volatile metals, and/or total chlorine and chloride from all feedstreams that ensures the maximum theoretical emission concentration (MTEC) as calculated in 40 CFR 63.1207(m)(2)(iii) is below the applicable emission standard; and</li> <li>- Interlock the minimum gas flowrate limit and maximum feedrate limit of 40 CFR 63.1207(m)(4)(i) to the automatic waste feed cut-off (AWFCO) system to stop hazardous waste burning when the gas flowrate or mercury, semivolatile metals, low volatile metals, and/or total chlorine and chloride feedrate exceeds the limits of 40 CFR 63.1207(m)(4)(i).</li> </ul>	<p>40 CFR 63.1207(m)(4)</p>
<p>When the Permittee determines the feedrate of mercury, semivolatile metals, low volatile metals, or total chlorine and chloride for purposes of this provision, except as provided by 40 CFR 63.1207(m)(6), the Permittee must assume that the analyte is present at the full detection limit when the feedstream analysis determines that the analyte is not detected in the feedstream.</p>	<p>40 CFR 63.1207(m)(5)</p>
<p>The Permittee must state in the site-specific test plan submitted for review and approval under 40 CFR 63.1207(e) that the Permittee intends to comply with the provisions of 40 CFR 63.1207(m). The Permittee must include in the test plan documentation that any surrogate that is proposed for gas flowrate adequately correlates with the gas flowrate.</p>	<p>40 CFR 63.1207(m)(7)</p>
<p>WHAT ARE THE TEST METHODS</p>	<p>hdr</p>
<p>Test Methods</p>	<p>hdr</p>
<p>When required in 40 CFR Part 63 subpart EEE, the following publication is incorporated by reference, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 Third Edition (November 1986), as amended by Updates I (July 1992), II (September 1994), IIA (August 1993), IIB (January 1995), and III (December 1996).</p>	<p>40 CFR 63.1208(a)</p>
<p>Dioxins and furans. The Permittee must use Method 0023A, Sampling Method for Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans emissions from Stationary Sources, EPA Publication SW-846, as incorporated by reference in 40 CFR 63.1208(a), to determine compliance with the emission standard for dioxins and furans;</p> <ul style="list-style-type: none"> <li>- The Permittee must sample for a minimum of three hours, and must collect a minimum sample volume of 2.5 dscm;</li> <li>- The Permittee may assume that nondetects are present at zero concentration.</li> </ul>	<p>40 CFR 63.1208(b)(1)</p>
<p>Mercury. The Permittee must use Method 29, provided in appendix A, 40 CFR 60, to demonstrate compliance with emission standard for mercury.</p>	<p>40 CFR 63.1208(b)(2)</p>
<p>Cadmium and lead. The Permittee must use Method 29, provided in appendix A, 40 CFR 60, to determine compliance with the emission standard for cadmium and lead (combined).</p>	<p>40 CFR 63.1208(b)(3)</p>
<p>Arsenic, beryllium, and chromium. The Permittee must use Method 29, provided in appendix A, 40 CFR 60, to determine compliance with the emission standard for arsenic, beryllium, and chromium (combined).</p>	<p>40 CFR 63.1208(b)(4)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

Hydrochloric acid and chlorine gas. The Permittee may use Methods 26A, 320, or 321 provided in appendix A, 40 CFR 60, to determine compliance with the emission standard for hydrochloric acid and chlorine gas (combined). The Permittee may use Methods 320 or 321 to make major source determinations under 40 CFR 63.9(b)(2)(v).	40 CFR 63.1208(b)(5)
Particulate matter. The Permittee must use Methods 5 or 5I, provided in appendix A, 40 CFR 60, to demonstrate compliance with the emission standard for particulate matter.	40 CFR 63.1208(b)(6)
Other Test Methods. The permittee may use applicable test methods in EPA Publication SW-846, as incorporated by reference in 40 CFR 63.1208(a), as necessary to demonstrate compliance with requirements of subpart EEE, except as otherwise specified in 40 CFR 63.1208(b)(2) to (b)(6).	40 CFR 63.1208(b)(7)
Feedstream analytical methods. The Permittee may use any reliable analytical method to determine feedstream concentrations of metals, chlorine, and other constituents. It is the Permittees responsibility to ensure that the sampling and analysis procedures are unbiased, precise, and that the results are representative of the feedstream. For each feedstream, the Permittee must demonstrate that: - Each analyte is not present above the reported level at the 80% upper confidence limit around the mean; and - The analysis could have detected the presence of the constituent at or below the reported level at the 80% upper confidence limit around the mean. (See Guidance for Data Quality Assessment -- Practical Methods for Data Analysis, EPA QA/G-9, January 1998, EPA/600/R-96/084).	40 CFR 63.1208(b)(8)
<b>MONITORING REQUIREMENTS</b>	hdr
<b>Continuous Emissions Monitoring Systems (CEMS) and Continuous Opacity Monitoring Systems (COMS).</b>	hdr
The Permittee must use a carbon monoxide CEMS to demonstrate and monitor compliance with the carbon monoxide and hydrocarbon standard under subpart EEE (3M has chosen to use a CO CEMS and they have removed their THC monitor). The Permittee must also use an oxygen CEMS to continuously correct the carbon monoxide level to 7 percent oxygen.	40 CFR 63.1209(a)(1)(i)
The permittee must install, calibrate, maintain, and operate a particulate matter CEMS to demonstrate and monitor compliance with the particulate matter standards under subpart EEE. However, compliance with the requirements in 40 CFR 63.1209 to install, calibrate, maintain and operate the PM CEMS is not required until such time that the Agency promulgates all performance specifications and operational requirements applicable to PM CEMS.	40 CFR 63.1209(a)(1)(iii)
Performance specifications. The Permittee must install, calibrate, maintain, and continuously operate the CEMS in compliance with the quality assurance procedures provided in the appendix to Subpart EEE and Performance Specifications 4B (carbon monoxide and oxygen) in appendix B, 40 CFR Part 60.	40 CFR 63.1209(a)(2)
Carbon monoxide (CO) readings exceeding the span. Except as provided by 40 CFR 63.1209(a)(3)(ii), if a CO CEMS detects a response that results in a one-minute average at or above the 3,000 ppmv span level required by Performance Specification 4B in appendix B, 40 CFR Part 60, the one-minute average must be recorded as 10,000 ppmv. The one-minute 10,000 ppmv value must be used for calculating the hourly rolling average CO level. CO CEMS that use a span value of 10,000 ppmv when one-minute CO levels are equal to or exceed 3,000 ppmv are not subject to 40 CFR 63.1209(a)(3)(i). CO CEMS that use a span value of 10,000 are subject to the same CEMS performance and equipment specifications when operating in the range of 3,000 ppmv to 10,000 ppmv that are provided by Performance Specification 4B for other carbon monoxide CEMS, except: - Calibration drift must be less than 300 ppmv; and - Calibration error must be less than 500 ppmv.	40 CFR 63.1209(a)(3)
Calculation of rolling averages initially. The carbon monoxide CEMS must begin recording one-minute average values by 12:01 a.m. and hourly rolling average values by 1:01 a.m., when 60 one-minute values will be available for calculating the initial hourly rolling average for those sources that come into compliance on the regulatory compliance date. Sources that elect to come into compliance before the regulatory compliance date must begin recording one-minute and hourly rolling average values within 60 seconds and 60 minutes (when 60 one-minute values will be available for calculating the initial hourly rolling average), respectively, from the time at which compliance begins.	40 CFR 63.1209(a)(6)(i)
Calculation of rolling averages upon intermittent operations. The Permittee must ignore periods of time when one-minute values are not available for calculating the hourly rolling average. When one-minute values become available again, the first one-minute value is added to the previous 59 values to calculate the hourly rolling average.	40 CFR 63.1209(a)(6)(ii)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Calculation of rolling averages when the hazardous waste feed is cutoff. Except as provided by 40 CFR 63.1209(a)(6)(iii)(B), the Permittee must continue monitoring carbon monoxide when the hazardous waste feed is cutoff if the source is operating. The Permittee must not resume feeding hazardous waste if the emission levels exceed the standard.</p> <p>The Permittee is not subject to the CEMS requirements of subpart EEE during periods of time the facility meets the requirements of 40 CFR 63.1206(b)(1)(ii) (compliance with emissions standards for nonhazardous waste burning sources when the Permittee is not burning hazardous waste).</p>	40 CFR 63.1209(a)(6)(iii)
<p>Operating parameter limits for hydrocarbons. If the Permittee elects to comply with the carbon monoxide and hydrocarbon emission standard by continuously monitoring carbon monoxide with a CEMS, the Permittee must demonstrate that hydrocarbon emissions during the comprehensive performance test do not exceed the hydrocarbon emissions standard. In addition, the limits the Permittee establishes on the destruction and removal efficiency (DRE) operating parameters required under 40 CFR 63.1209(j) also ensure that compliance is maintained with the hydrocarbon emission standard. If the Permittee does not conduct the hydrocarbon demonstration and DRE tests concurrently, establish separate operating parameter limits under 40 CFR 63.1209(j) based on each test and the more restrictive of the operating parameter limits applies.</p>	40 CFR 63.1209(a)(7)
<p>Other Continuous Monitoring Systems (CMS).</p>	hdr
<p>The Permittee must use CMS (e.g., thermocouples, pressure transducers, flow meters) to document compliance with the applicable operating parameter limits under subpart EEE.</p>	40 CFR 63.1209(b)(1)
<p>Except as specified in 40 CFR 63.1209(b)(2)(i) and (ii), the Permittee must install and operate continuous monitoring systems other than CEMS in conformance with 40 CFR 63.8(c)(3) that requires the Permittee, at a minimum, to comply with the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.</p>	40 CFR 63.1209(b)(2)
<p>The calibration of thermocouples must be verified at a frequency and in a manner consistent with manufacturer specifications, but no less frequent than once per year. The Permittee must operate and maintain optical pyrometers in accordance with manufacturer specifications unless otherwise approved by the Administrator. The Permittee must calibrate optical pyrometers in accordance with the frequency and procedures recommended by the manufacturer, but no less frequent than once per year, unless otherwise approved by the Administrator.</p>	40 CFR 63.1209(b)(2)(i)
<p>CMS must sample the regulated parameter without interruption, and evaluate the detector response at least once each 15 seconds, and compute and record the average values at least every 60 seconds.</p>	40 CFR 63.1209(b)(3)
<p>The span of the non-CEMS CMS detector must not be exceeded. The Permittee must interlock the span limits into the automatic waste feed cutoff system required by 40 CFR 63.1206(c)(3).</p>	40 CFR 63.1209(b)(4)
<p>Calculation of rolling averages initially. Continuous monitoring systems must begin recording one-minute average values by 12:01 a.m., hourly rolling average values by 1:01 a.m. (e.g., when 60 one-minute values will be available for calculating the initial hourly rolling average), and twelve-hour rolling averages by 12:01 p.m. (e.g., when 720 one-minute averages are available to calculate a 12-hour rolling average), for those sources that come into compliance on the regulatory compliance date.</p> <p>Sources that elect to come into compliance before the regulatory compliance date must begin recording one-minute, hourly rolling average, and 12-hour rolling average values within 60 seconds, 60 minutes (when 60 one-minute values will be available for calculating the initial hourly rolling average), and 720 minutes (when 720 one-minute values will be available for calculating the initial 12-hour rolling average) respectively, from the time at which compliance begins.</p>	40 CFR 63.1209(b)(5)(i)
<p>Calculation of rolling averages upon intermittent operations. The Permittee must ignore periods of time when one-minute values are not available for calculating rolling averages. When one-minute values become available again, the first one-minute value is added to the previous one-minute values to calculate rolling averages.</p>	40 CFR 63.1209(b)(5)(ii)
<p>Calculation of rolling averages when the hazardous waste feed is cutoff. Except as provided by 40 CFR 63.1209(b)(5)(iii)(B), the Permittee must continue monitoring operating parameter limits with a CMS when the hazardous waste feed is cutoff if the source is operating. The Permittee must not resume feeding hazardous waste if an operating parameter exceeds its limit.</p> <p>The Permittee is not subject to the CMS requirements of subpart EEE during periods of time the Permittee meets the requirements of 40 CFR 63.1206(b)(1)(ii) (compliance with emissions standards for nonhazardous waste burning sources when not burning hazardous waste).</p>	40 CFR 63.1209(b)(5)(iii)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

Analysis of Feedstreams	hdr
Prior to feeding the material, the Permittee must obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits provided in 40 CFR 63.1209.	40 CFR 63.1209(c)(1)
(RECORDKEEPING)  The Permittee must develop and implement a feedstream analysis plan and record it in the operating record. The plan must specify at a minimum: - The parameters for which the Permittee will analyze each feedstream to ensure compliance with operating parameter limits; - If the analysis will be obtained by performing sampling and analysis or by other methods; - How the Permittee will use the analysis to document compliance with applicable feedrate limits; - The test methods to be used to obtain the analyses; - The sampling method used to obtain a representative sample of each feedstream to be analyzed using sampling methods described in appendix IX, 40 CFR 266, or an equivalent method; and - The frequency with which the Permittee will review or repeat the initial analysis of the feedstream to ensure that the analysis is accurate and up to date.	40 CFR 63.1209(c)(2)
Review and approval of analysis plan. The Permittee must submit the feedstream analysis plan to the Administrator for review and approval, if requested.	40 CFR 63.1209(c)(3)
Compliance with feedrate limits. To comply with the applicable feedrate limits of 40 CFR 63.1209, the Permittee must monitor and record feedrates as follows: - Determine and record the value of the parameter for each feedstream by sampling and analysis or other method; - Determine and record the mass or volume flowrate of each feedstream by a CMS. If the Permittee determines flowrate of a feedstream by volume, the Permittee must determine and record the density of the feedstream by sampling and analysis (unless the Permittee reports the constituent concentration in units of weight per unit volume (e.g., mg/l)); and - Calculate and record the mass feedrate of the parameter per unit time.	40 CFR 63.1209(c)(4)
Waiver of monitoring of constituents in certain feedstreams. The Permittee is not required to monitor levels of metals or chlorine in the following feedstreams to document compliance with the feedrate limits under this section provided that the Permittee documents in the comprehensive performance test plan the expected levels of the constituent in the feedstream and account for those assumed feedrate levels in documenting compliance with feedrate limits: natural gas, process air, and feedstreams from vapor recovery systems.	40 CFR 63.1209(c)(5)
Performance Evaluations	hdr
The requirements of 40 CFR 63.8(d) (Quality control program) and (e) (Performance evaluation of continuous monitoring systems) apply, except that the Permittee must conduct performance evaluations of components of the CMS under the frequency and procedures (for example, submittal of performance evaluation test plan for review and approval) applicable to performance tests as provided by 40 CFR 63.1207. The Permittee must comply with the quality assurance procedures for CEMS prescribed in the appendix to subpart EEE.	40 CFR 63.1209(d)
Conduct of Monitoring	hdr
The provisions of 40 CFR 63.8(b) apply.	40 CFR 63.1209(e)
Operation and Maintenance of Continuous Monitoring Systems	hdr
The provisions of 40 CFR 63.8(c) apply except: - 40 CFR 63.8(c)(3). The requirements of 40 CFR 63.1211(c), that requires CMSs to be installed, calibrated, and operational on the compliance date, shall be complied with instead of 40 CFR 63.8(c)(3); - 40 CFR 63.8(c)(4)(ii). The performance specifications for carbon monoxide, hydrocarbon, and oxygen CEMSs in Part 60, subpart B that requires detectors to measure the sample concentration at least once every 15 seconds for calculating an average emission rate once every 60 seconds shall be complied with instead of 40 CFR 63.8(c)(4)(ii).	40 CFR 63.1209(f)
Alternative Monitoring Requirements Other Than Continuous Emissions Monitoring Systems (CEMS)	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(REQUEST)</p> <p>The Permittee may submit an application to the Administrator under 40 CFR 63.1209(g) for approval of alternative monitoring requirements to document compliance with the emission standards of subpart EEE. For requests to use additional CEMS, however, the Permittee must use 40 CFR 63.1209(a)(5) and 40 CFR 63.8(f).</p> <ul style="list-style-type: none"> <li>- The Administrator will not approve averaging periods for operating parameter limits longer than specified in 40 CFR 63.1209 unless the Permittee documents using data or information that the longer averaging period will ensure that emissions do not exceed levels achieved during the comprehensive performance test over any increment of time equivalent to the time required to conduct three runs of the performance test.</li> <li>- If the Administrator approves the application to use an alternative monitoring requirement, the Permittee must continue to use that alternative until the Permittee receives approval under 40 CFR 63.1209(g) to use another monitoring requirement.</li> </ul>	<p>40 CFR 63.1209(g)(1)(i)</p>
<p>(REQUEST)</p> <p>The Permittee may submit an application to waive an operating parameter limit specified in 40 CFR 63.1209 based on documentation that neither that operating parameter limit nor an alternative operating parameter limit is needed to ensure compliance with the emission standards of subpart EEE.</p>	<p>40 CFR 63.1209(g)(1)(ii)</p>
<p>(REQUEST)</p> <p>The Permittee must comply with the following procedures for applications submitted under 40 CFR 63.1209(g)(1)(i) and (ii):          The Permittee must submit the application to the Administrator not later than with the comprehensive test plan.          The permittee must include in the application:</p> <ul style="list-style-type: none"> <li>- Data or information justifying the request for an alternative monitoring requirement;</li> <li>- A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach/technique, the averaging period for the limit, and how the limit is to be calculated; and</li> <li>- Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard, or that it is the monitoring requirement that best assures compliance with the standard and that is technically and economically practicable.</li> </ul> <p>(continued below)</p>	<p>40 CFR 63.1209(g)(1)(iii)</p>
<p>(continued)</p> <p>(REQUEST)</p> <p>The Permittee will be notified of approval or intention to deny approval of the request within 90 calendar days after receipt of the original request and within 60 calendar days after receipt of any supplementary information submitted. The Administrator will not approve an alternative monitoring request unless the alternative monitoring requirement provides equivalent or better assurance of compliance with the relevant emission standard, or is the monitoring requirement that best assures compliance with the standard and that is technically and economically practicable. Before disapproving any request, the Administrator will notify the Permittee of the intention to disapprove the request together with:</p> <ul style="list-style-type: none"> <li>- Notice of the information and findings on which the intended disapproval is based; and</li> </ul> <p>(continued below)</p>	<p>40 CFR 63.1209(g)(1)(iii) (continued)</p>
<p>(continued)</p> <p>(REQUEST)</p> <ul style="list-style-type: none"> <li>- Notice of opportunity for the Permittee to present additional information to the Administrator before final action on the request. At the time the Administrator notifies the Permittee of intention to disapprove the request, the Administrator will specify how much time the Permittee will have after being notified of the intended disapproval to submit the additional information.</li> </ul> <p>The Permittee is responsible for ensuring that any supplementary and additional information supporting the application is submitted in a timely manner to enable the Administrator to consider the application during review of the comprehensive performance test plan. Neither the submittal of an application, nor the Administrator's failure to approve or disapprove the application, relieves the Permittee of the responsibility to comply with the provisions of subpart EEE.</p>	<p>40 CFR 63.1209(g)(1)(iii) (continued)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>The Administrator may determine on a case-by-case basis at any time (e.g., during review of the comprehensive performance test plan, during compliance certification review) that the Permittee needs to limit additional or alternative operating parameters (e.g., opacity in addition to or in lieu of operating parameter limits on the particulate matter control device) or that alternative approaches to establish limits on operating parameters may be necessary to document compliance with the emission standards of subpart EEE.</p>	<p>40 CFR 63.1209(g)(2)</p>
<p>Reduction of Monitoring Data</p>	<p>hdr</p>
<p>The provisions of 40 CFR 63.8(g) apply.</p>	<p>40 CFR 63.1209(h)</p>
<p>When an Operating Parameter is Applicable to Multiple Standards.</p>	<p>hdr</p>
<p>40 CFR 63.1209(j) through (p) require the Permittee to establish limits on operating parameters based on comprehensive performance testing to ensure the Permittee maintains compliance with the emission standards of subpart EEE. For several parameters, the Permittee must establish a limit for the parameter to ensure compliance with more than one emission standard. An example is a limit on minimum combustion chamber temperature to ensure compliance with both the DRE standard of 40 CFR 63.1209(j) and the dioxin/furan standard of 40 CFR 63.1209(k). If the performance tests for such standards are not performed simultaneously, the most stringent limit for a parameter derived from independent performance tests applies.</p>	<p>40 CFR 63.1209(i)</p>
<p>Destruction and Removal Efficiency (DRE)</p>	<p>hdr</p>
<p>To remain in compliance with the destruction and removal efficiency (DRE) standard, the Permittee must establish operating limits during the comprehensive performance test (or during a previous DRE test under provisions of 40 CFR 63.1206(b)(7)) for the following parameters, unless the limits are based on manufacturer specifications, and comply with those limits at all times that hazardous waste remains in the combustion chamber (i.e., the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated):</p> <ul style="list-style-type: none"> <li>- The Permittee must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. The Permittee must document the temperature measurement location in the test plan submitted under 40 CFR 63.1207(e);</li> <li>- The Permittee must establish a minimum hourly rolling average limit as the average of the test run averages;</li> </ul> <p>(continued below)</p>	<p>40 CFR 63.1209(j)</p>
<p>(continued)</p> <ul style="list-style-type: none"> <li>- As an indicator of gas residence time in the control device, the Permittee must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter documented in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.</li> <li>- The Permittee must comply with this limit on a hourly rolling average basis;</li> <li>- The Permittee must establish limits on the maximum pumpable and total (i.e., pumpable and nonpumpable) hazardous waste feedrate for each location where hazardous waste is fed.</li> <li>- The Permittee must establish the limits as the average of the maximum hourly rolling averages for each run.</li> <li>- The Permittee must comply with the feedrate limit(s) on a hourly rolling average basis;</li> <li>- The Permittee must specify operating parameters and limits to ensure that good operation of each hazardous waste firing system is maintained.</li> </ul>	<p>40 CFR 63.1209(j) (continued)</p>
<p>Dioxins and Furans</p>	<p>hdr</p>
<p>The Permittee must comply with the dioxin and furans emission standard by establishing and complying with the applicable operating parameter limits in 40 CFR 63.1209(k) which are provided below. The Permittee must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.</p>	<p>40 CFR 63.1209(k)</p>
<p>Gas temperature at the inlet to a dry particulate matter control device. For hazardous waste burning incinerators, if the combustor is equipped with an electrostatic precipitator, baghouse (fabric filter), or other dry emissions control device where particulate matter is suspended in contact with combustion gas, the Permittee must establish a limit on the maximum temperature of the gas at the inlet to the device on an hourly rolling average. The Permittee must establish the hourly rolling average limit as the average of the test run averages.</p>	<p>40 CFR 63.1209(k)(1)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>Minimum combustion chamber temperature. The Permittee must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. The Permittee must document the temperature measurement location in the test plan submitted under 40 CFR 63.1207(e) and (f).</p> <p>The Permittee must establish a minimum hourly rolling average limit as the average of the test run averages.</p>	<p>40 CFR 63.1209(k)(2)</p>
<p>Maximum flue gas flowrate or production rate. As an indicator of gas residence time in the control device, the Permittee must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that is documented in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.</p> <p>The Permittee must comply with this limit on a hourly rolling average basis.</p>	<p>40 CFR 63.1209(k)(3)</p>
<p>Maximum hazardous waste feedrate. The Permittee must establish limits on the maximum pumpable and total (pumpable and nonpumpable) hazardous waste feedrate for each location where waste is fed.</p> <p>The Permittee must establish the limits as the average of the maximum hourly rolling averages for each run.</p> <p>The Permittee must comply with the feedrate limit(s) on a hourly rolling average basis</p>	<p>40 CFR 63.1209(k)(4)</p>
<p>Mercury</p>	<p>40 CFR 63.1209(l)</p>
<p>The Permittee must comply with the mercury emission standard by establishing and complying with the applicable operating parameter limits of 40 CFR 63.1209(l) which are provided below. The Permittee must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.</p>	<p>40 CFR 63.1209(l)</p>
<p>(REQUEST)</p> <p>Feedrate of total mercury. The Permittee must establish a 12-hour rolling average limit for the total feedrate of mercury in all feedstreams as the average of the test run averages, unless mercury feedrate limits are extrapolated from performance test feedrate levels under the following provisions.</p> <ul style="list-style-type: none"> <li>- The Permittee may request as part of the performance test plan under 40 CFR 63.7(b) and (c) and 40 CFR 63.1207(e) and (f) to use the mercury feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable feedrate limits and emission rates.</li> </ul> <p>(continued below)</p>	<p>40 CFR 63.1209(l)(1)</p>
<p>(continued)</p> <ul style="list-style-type: none"> <li>- The extrapolation methodology will be reviewed and approved, as warranted, by the Administrator. The review will consider in particular whether: Performance test metal feedrates are appropriate (i.e., whether feedrates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spiked material is appropriate); and Whether the extrapolated feedrates the Permittee requests are warranted considering historical metal feedrate data.</li> <li>- The Administrator will review the performance test results in making a finding of compliance required by 40 CFR 63.6(f)(3) and 63.1206(b)(3) to ensure that the Permittee has interpreted emission test results properly and that the extrapolation procedure is appropriate for the source.</li> </ul>	<p>40 CFR 63.1209(l)(1) (continued)</p>
<p>Wet scrubber. If the combustor is equipped with a wet scrubber, the Permittee must establish operating parameter limits prescribed by 40 CFR 63.1209(o)(3), except for 40 CFR 63.1209(o)(3)(iv).</p>	<p>40 CFR 63.1209(l)(2)</p>
<p>Particulate Matter</p>	<p>hdr</p>
<p>The Permittee must comply with the particulate matter emission standard by establishing and complying with the applicable operating parameter limits in 40 CFR 63.1209(m) which are provided below. The Permittee must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.</p>	<p>40 CFR 63.1209(m)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

Control device operating parameter limits (OPLs). Wet scrubbers. For sources equipped with wet scrubbers the Permittee must establish limits on the following parameters:  To ensure that the solids content of the scrubber liquid does not exceed levels during the performance test, the Permittee must establish a minimum blowdown rate using a CMS and either a minimum scrubber tank volume or liquid level using a CMS.  (continued below)	40 CFR 63.1209(m)(1)(i)(B)(1)(ii)
Maximum flue gas flowrate or production rate. As an indicator of gas residence time in the control device, establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter documented in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.  Comply with this limit on a hourly rolling average basis.	40 CFR 63.1209(m)(2)
Maximum ash feedrate. Establish a maximum ash feedrate limit as a 12-hour rolling average based on the average of the test run averages.	40 CFR 63.1209(m)(3)
Semivolatile Metals and Low Volatility Metals.	hdr
Comply with the semivolatile metal (cadmium and lead) and low volatile metal (arsenic, beryllium, and chromium) emission standards by establishing and complying with the applicable operating parameter limits in CFR 63.1209(n) which are provided below. Base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.	40 CFR 63.1209(n)
(REQUEST)  Feedrate extrapolation. The Permittee may request as part of the test plan under 40 CFR 63.7(b) and (c) and 40 CFR 63.1207(e) and (f) to use the semivolatile metal and low volatile metal feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable feedrate limits and emission rates. The extrapolation methodology will be reviewed and approved by the Administrator. The review will consider whether: - Performance test metal feedrates are appropriate; and - Whether the extrapolated feedrates requested are warranted considering historical metal feedrate data. The Administrator will review the performance test results in making a finding of compliance required by 40 CFR 63.6(f)(3) and 63.1206(b)(3) to ensure that the emission test results have been interpreted properly and that the extrapolation procedure is appropriate for the source.	40 CFR 63.1209(n)(2)(ii)
Control device operating parameter limits (OPLs). Establish operating parameter limits on the particulate matter control device as specified by 40 CFR 63.1209(m)(1).	40 CFR 63.1209(n)(3)
Maximum total chlorine and chloride feedrate. Establish a 12-hour rolling average limit for the feedrate of total chlorine and chloride in all feedstreams as the average of the test run averages.	40 CFR 63.1209(n)(4)
Maximum flue gas flowrate or production rate. As an indicator of gas residence time in the control device, establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.  Comply with this limit on a hourly rolling average basis.	40 CFR 63.1209(n)(5)
Hydrochloric Acid and Chlorine Gas.	hdr
Comply with the hydrogen chloride and chlorine gas emission standard by establishing and complying with the applicable operating parameter limits in 40 CFR 63.1209(o) which are provided below. Base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.	40 CFR 63.1209(o)
Feedrate of total chlorine and chloride. Establish a 12-hour rolling average limit for the total feedrate of chlorine (organic and inorganic) in all feedstreams as the average of the test run averages.	40 CFR 63.1209(o)(1)
Maximum flue gas flowrate or production rate. As an indicator of gas residence time in the control device, establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.  Comply with this limit on a hourly rolling average basis.	40 CFR 63.1209(o)(2)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

Wet scrubber. Establish a limit on minimum pressure drop across the wet scrubber on an hourly rolling average as the average of the test run averages; Establish a limit on minimum pH on an hourly rolling average as the average of the test run averages; Establish limits on either the minimum liquid to gas ratio or the minimum scrubber water flowrate and maximum flue gas flowrate on an hourly rolling average as the average of the test run averages. If limits are established on maximum flue gas flowrate under 40 CFR 63.1209(o), you need not establish a limit on maximum flue gas flowrate under 40 CFR 63.1209(o)(2).	40 CFR 63.1209(o)(3)
NOTIFICATION REQUIREMENTS	hdr
Summary of Notification Requirements	hdr
Subpart EEE notification, request, petition, or application requirements are found within this section of the permit and are marked as a "NOTIFICATION, REQUEST, PETITION, or APPLICATION", and a summary of the all notification requirements is found in 40 CFR 63.1210 and as an attachment to this permit.	40 CFR 63.1210(a)
Notification of Compliance Status	hdr
(NOTIFICATION)  The Notification of Compliance status requirements of 40 CFR 63.9(h) apply, except that: - The notification is a Notification of Compliance, rather than compliance status; - The notification is required for the initial comprehensive performance test and each subsequent comprehensive and confirmatory performance test; and - The Permittee postmarks the notification before the close of business on the 90th day following completion of relevant compliance demonstration activity specified in this subpart rather than the 60th day as required by 40 CFR 63.9(h)(2)(ii).  Upon postmark of the Notification of Compliance, the operating parameter limits identified in the Notification of Compliance, as applicable, shall be complied with, the limits identified in the Documentation of Compliance or a previous Notification of Compliance are no longer applicable.  The Notification of Compliance requirements of 40 CFR 63.1207(j) also apply.	40 CFR 63.1210(b)
Summary of Reporting and Recordkeeping Requirements	hdr
For each instance of dumpstack use, the Permittee shall keep a record of the date of use, the length of time the dumpstack was used, the operating conditions of the incinerator, and the reason for each dumpstack use.	Minn. R. 7007.0800, subp. 5
Subpart EEE recordkeeping and reporting requirements are found within this section of the permit and are marked as a "REPORTING or RECORDKEEPING". A summary of the all notification requirements is found in 40 CFR 63.1211 and as an attachment to this permit.	40 CFR 63.1211(a) and (b)
Documentation of Compliance	hdr
(RECORDKEEPING)  By the compliance date, develop and include in the operating record a Documentation of Compliance. The Permittee is not subject to this requirement, however, if a Notification of Compliance is submitted under 40 CFR 63.1207(j) prior to the compliance date.  The Documentation of Compliance must identify the applicable emission standards under subpart EEE and the limits on the operating parameters under 40 CFR 63.1209 that will ensure compliance with those emission standards.  (continued below)	40 CFR 63.1211(c)
(continued)  Include a signed and dated certification in the Documentation of Compliance that: - Required CEMs and CMS are installed, calibrated, and continuously operating in compliance with the requirements of subpart EEE; and -Based on an engineering evaluation prepared under the Permittee's direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation, and considering at a minimum the design, operation, and maintenance characteristics of the combustor and emissions control equipment, the types, quantities, and characteristics of feedstreams, and available emissions data: -- The Permittee is in compliance with the emission standards of subpart EEE; and -- The limits on the operating parameters under 40 CFR 63.1209 ensure compliance with the emission standards of subpart EEE.  (continued below)	40 CFR 63.1211(c) (continued)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<p>(continued)</p> <p>The Permittee must comply with the emission standards and operating parameter limits specified in the Documentation of Compliance.</p>	<p>40 CFR 63.1211(c) (continued)</p>
<p>Data Compression</p>	<p>hdr</p>
<p>(REQUEST)</p> <p>The Permittee may submit a written request for approval to use data compression techniques to record data from CMS, including CEMS, less than that required by 40 CFR 63.1209. Submit the request for review and approval as part of the comprehensive performance test plan.</p> <p>Record a data value at least once each ten minutes.</p> <p>For each CEMS or operating parameter for which you request to use data compression techniques, the Permittee must recommend:</p> <ul style="list-style-type: none"> <li>- A fluctuation limit that defines the maximum permissible deviation of a new data value from a previously generated value without requiring the Permittee to revert to recording each one-minute value.</li> </ul> <p>(continued below)</p>	<p>40 CFR 63.1211(d)</p>
<p>(continued)</p> <p>(REQUEST)</p> <ul style="list-style-type: none"> <li>-- If a fluctuation limit is exceeded, record each one-minute value for a period of time not less than ten minutes.</li> <li>-- If neither the fluctuation limit nor the data compression limit are exceeded during that period of time, the Permittee may reinitiate recording data values on a frequency of at least once each ten minutes; and</li> <li>- A data compression limit defined as the closest level to an operating parameter limit or emission standard at which reduced data recording is allowed.</li> <li>-- Within this level and the operating parameter limit or emission standard, the Permittee must record each one-minute average.</li> <li>-- The data compression limit should reflect a level at which the Permittee is unlikely to exceed the specific operating parameter limit or emission standard, considering its averaging period, with the addition of a new one-minute average.</li> </ul>	<p>40 CFR 63.1211(d) (continued)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Subject Item: EU 011 Waste Processing via Komar Shredder**

<b>What to do</b>	<b>Why to do it</b>
For each instance of dumpstack use, the Permittee shall keep a record of the date of use, the length of time the dumpstack was used, the operating conditions, and the reason for each dumpstack use.	Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Subject Item:** CE 004 Subcooling Vessel**Associated Items:** EU 008 Replacement Rotating Kiln

<b>What to do</b>	<b>Why to do it</b>
Liquid Flow Rate: greater than or equal to 3200 gallons/minute using 1-Hour Rolling Average for recirculation water flow.	Minn. R. 7007.0800, subp. 14
Water pressure: greater than or equal to 19.40 psi (gauge) using 1-Hour Rolling Average minimum scrubber liquor feed pressure.	40 CFR 63.1209(m)
Water flow rate: greater than or equal to 192.0 gallons/minute using 1-Hour Rolling Average minimum combined blow down rate for the Subcooling Vessel and the Venturi Quench (CE010). See also CE010.	40 CFR 63.1209(m)(1)(i)(B)(1)(ii) and (4); 40 CFR 63.1209(n)(3)
Scrubber Liquor pH: greater than or equal to 1.2 using 1-Hour Rolling Average.	40 CFR 63.1209(o)(3)(iv)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Subject Item:** CE 005 M1 Module**Associated Items:** EU 008 Replacement Rotating Kiln

<b>What to do</b>	<b>Why to do it</b>
Pressure Drop: less than or equal to 16.0 inches of water column using 1-Hour Rolling Average	Minn. R. 7007.0800, subp. 14
Water flow rate: greater than or equal to 120.0 gallons/minute using 1-Hour Rolling Average minimum make-up rate (to comply with minimum blow down rate limit).	40 CFR 63.1209(m)(1)(i)(B)(1)(ii) and (ii)
Liquid to Gas Ratio: greater than or equal to 40.6 gallons per 1000 standard cubic feet using a 1-Hour Rolling Average.	40 CFR 63.1209(m)(1)(i)(C); 40 CFR 63.1209(n)(3)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Subject Item:** CE 009 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 008 Replacement Rotating Kiln

What to do	Why to do it
Visible Emissions: The Permittee shall check the fabric filter for any visible emissions once each time the unit is operating.	Minn. R. 7007.0800, subp. 4 and 5
Recordkeeping of Visible Emissions. The Permittee shall record the time and date of each visible emission inspection and whether or not any visible emissions were observed.	Minn. R. 7007.0800, subp. 4 and 5
The Permittee shall operate and maintain the fabric filter 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
<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none"> <li>- visible emissions are observed; or</li> <li>- the fabric filter or any of its components are found during the inspections to need repair.</li> </ul> <p>Corrective actions shall 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 &amp; M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for the filter.</p>	Minn. R. 7007.0800, subp. 4, 5, and 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Subject Item: CE 010 Venturi Quench****Associated Items:** EU 008 Replacement Rotating Kiln

<b>What to do</b>	<b>Why to do it</b>
Temperature: less than or equal to 182 degrees F using 1-Hour Rolling Average for the quench outlet flue gas temperature.	Minn. R. 7007.0800, subp. 14
Water flow rate: greater than or equal to 192.0 gallons/minute using 1-Hour Rolling Average minimum combined blow down rate for the Subcooling Vessel (CE004) and the Venturi Quench. See also CE004.	40 CFR 63.1209(m)(1)(i)(B)(1)(ii) and (4); 40 CFR 63.1209(n)(3)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

**Subject Item:** CE 011 Electrostatic Precipitator - High Efficiency**Associated Items:** EU 008 Replacement Rotating Kiln

<b>What to do</b>	<b>Why to do it</b>
Secondary Power: greater than or equal to 4.99 kilowatts using one 1-Hour Rolling Average.	40 CFR 63.1209(m)(1)(iv)(A-C)
Operate control equipment when the incinerator is operating except while burning only natural gas.	Minn. R. 7007.0800, subp. 2
The WESP must be operated with at least the minimum specific collection area (SCA) in service determined during the most recent particulate matter performance test showing compliance.  If the sections in the WESP are physically and electrically equivalent, the Permittee can meet this requirement by operating the WESP with no less than the number of sections that were operating during the most recent particulate matter performance test with results equal to or less than the particulate matter emission limit.	Minn. R. 7007.0800, subp. 14
Monitor and record the identity and minimum number of WESP sections (or SCA if sections are not equivalent) in service each day that the WESP is operating.	Minn. R. 7007.0800, subp. 4 and 5

**TABLE B: SUBMITTALS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator  
Permit Number: 16300025 - 001

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 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 any application for a permit or permit amendment to:

Permit Technical Advisor  
Permit Section  
Air Quality Division  
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 Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

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

Supervisor  
Compliance Determination Unit  
Air Quality Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

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

Mr. George Czerniak  
Air and Radiation Branch  
EPA Region V  
77 West Jackson Boulevard  
Chicago, Illinois 60604

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

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

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility

**TABLE B: RECURRENT SUBMITTALS**

02/14/05

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 001

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall 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. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 16300025-001**

This technical support document is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal regulations and Minn. R. (40 CFR, Section 70.7(a)(5) and Minn. R. 7007.0850, subp.1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the determination to issue the permit.

**1. General Information**

**1.1. Applicant and Stationary Source Location:**

Applicant/Address	Stationary Source/Address (SIC Code: 4953)
3M Cottage Grove Incinerator 3M Center – General Offices I-94 and McKnight Road St. Paul, Minnesota 55144	10746 Innovation Drive Chemolite Building 111 Cottage Grove Washington County
Contact: Robert Siegel, Environmental Engineering Specialist (651) 458-1380	

**1.2. Description of the Permit Action**

The 3M Company (Permittee) Cottage Grove Center (Facility) is located at 10746 Innovation Road, Cottage Grove, Minnesota. 3M operates a thermal treatment system under separate air quality and hazardous waste permits. The 3M Corporate Incinerator consists of a rotary kiln and a secondary combustion chamber (SCC) followed by a wet off-gas cleaning system. The off-gas cleaning system consists of a quench chamber, a subcooler, a particulate removal device known as the M1 module, a wet electrostatic precipitator (WESP), an induced draft fan, and an exhaust stack.

Also located at this Facility are indoor and outdoor container storage areas, outdoor tank storage areas, a containment building for bulk solids storage, a tanker truck unloading area, outdoor trailer storage, indoor and outdoor material handling areas, and a rotary kiln incinerator with a secondary combustion chamber. These units provide treatment and storage of hazardous waste generated by 3M's operating divisions. No disposal of hazardous waste is conducted at this Facility. The material storage and handling areas of the facility are permitted under a separate RCRA permit and are not covered under this air emissions permit.

This permit authorizes the operation of the combustion system consisting of a rotary kiln and a secondary combustion chamber. The rotary kiln is 40 feet long, has a shell diameter of 14 feet 9 inches, and is designed as a primary combustion chamber. The secondary combustion chamber

is 60 feet high and has a shell diameter of 20 feet. It provides additional residence time to combust off-gases of organic wastes. An emergency vent stack is provided at the roof of the secondary combustion chamber. The combustion system has no boiler. This permit does not authorize the installation of a future boiler.

The 3M Corporate Incinerator, which includes container and tanker storage areas, provides treatment and storage for business-related wastes generated by 3M's operating divisions throughout North America. The Incineration system is designed to handle a variety of wastes introduced through four separate feed systems. Materials can be fed to the rotary kiln by four means depending on the waste stream. Solids are fed through a bulk feed chute (pakfeeder and Komar shredder); pumpable liquids are fed through lances or the frontwall burner; sludge is fed through a lance from either the Building 145 sludge room or the Building 47 pump room; and direct burn wastes are fed through a lance.

Pollution control is facilitated with several flue gas treatment devices. The incinerator exhaust gases are saturated and cooled in the quench chamber. Flue gases then pass through a subcooling tower and filtering module. Final pollution control is provided by a wet electrostatic precipitator. Flue gases are pulled through the system with an induced draft fan and exhausted through a 165-foot stack to the atmosphere.

Hazardous waste is shipped to the Facility via semi-trailers in 55-gallon steel drums, totes, plastic and fiber drums, pails, boxes, bags, portable tanks, and tanker trucks. The types of containerized wastes received include solids, gases in cylinders, pumpable sludges, organic liquids, and aqueous liquids.

**1.3 Description of any Changes Allowed with this Permit Issuance**

There are no changes allowed with this permit issuance that have not been previously permitted.

**1.4 Description of All Amendments Issued Since the Issuance of the Last Total Facility Permit and to be Included in the Part 70 Permit**

<b>Permit Number and Issuance Date</b>	<b>Action Authorized</b>
16300025-015 December, 2003	Major Modification to convert a tank from fuel oil storage to hazardous waste storage.
16300025-014 May 20, 2003	Major Modification, change in operating parameters and performance testing
16300025-013 November 22, 2000	Major Amendment, Combined Permit
16300025-011 October 16, 1995	Major Modification, Operating Parameters
16300025-009	Major Modification, Change of Limits

<b>Permit Number and Issuance Date</b>	<b>Action Authorized</b>
16300025-015 December, 2003	Major Modification to convert a tank from fuel oil storage to hazardous waste storage.
September, 1995	
23-AI-92-Test-1 1992	Temporary Operation of Control Equipment
23-AI-89-O-6 March 29, 1989	Total Facility Permit

**1.5. Facility Emissions:**

**Table 1. Total Facility Potential to Emit Summary:**

	PM tpy	PM <sub>10</sub> tpy	SO <sub>2</sub> tpy	NO <sub>x</sub> tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	39	39	95	244	94.6	10.3	33.6	35.4
Total Facility Actual Emissions	6	6	0.34	67	3.2	2.3	1.1	2.6

**Table 2. Facility Classification**

<b>Classification</b>	<b>Major/Affected Source</b>	<b>Synthetic Minor*</b>	<b>Minor</b>
PSD			PM, Lead, NOx, SO2, CO, VOC
NAAR		SO2, CO (Title I Conditions were established in 1995 when the area was non-attainment for SO2 and CO. The area is now attainment for SO2 and CO, but the original Title I Conditions stand.)	
Part 70 Permit Program	NOx, HCl (single HAP), Total HAPs	SO2, CO**	PM, Lead, VOC

\*Refers to potential emissions that are less than those specified as major by 40 CFR 52.21, 40 CFR pt. 51 Appendix S, and 40 CFR pt. 70

\*\*The permit contains enforceable limits restricting SO2 and CO emissions to less than 100 tpy

## **2. Regulatory and/or Statutory Basis**

### **2.1. Background**

3M was aware that NESHAP Standards (under 40 CFR 63) would eventually be promulgated for hazardous waste incinerators. 3M wanted to be proactive in its ability to meet the emission limits from these standards, and wanted to initiate a construction program to be well underway by the time the standards were promulgated.

One goal of the 1995 permitting action was to establish “synthetic minor” limits for the source, making it non-major for New Source Review purposes and paving the way for future changes to the facility. (In 1995, the source was located in an area that was nonattainment for carbon monoxide and sulfur dioxide. Since then, the area has been redesignated as attainment for both pollutants.) The “synthetic minor” limits still will apply to the facility as Title I Conditions and the source will remain non-major, but the freedom from being a New Source Review major source provides flexibility in making changes at the source.

## **2.2. Applicability of Title V Permitting**

The last amendment to the total facility permit was issued jointly under the Air Quality and Hazardous Waste rules in December of 2003. In Minnesota, such joint permits are rare. Changes to permit language (Air Quality amendments and Hazardous Waste modifications) in joint permits must at all times comply with both sets of permitting rules, which adds a layer of complexity to any permit action. With this permit action MPCA has chosen to issue the Air and RCRA permits separately so that emissions to the air will be covered by the air permit and storage and container management issues will be covered by the RCRA permit.

Under the Part 63 NESHAPs, the 3M Cottage Grove complex is one source, and that source is major. 3M therefore needed to obtain a Title V permit for its hazardous waste incinerator. Because of the complexity of satisfying both sets of permitting rules, MPCA chose to delay issuance of the Title V Permit until the NESHAP standards were promulgated and the Trial Burn (a.k.a. Comprehensive Performance Test (CPT)) was completed. Now the NESHAP standards have been promulgated. The CPT was delayed due to negotiations between 3M and U.S Environmental Protection Agency (EPA) regarding the content of the CPT plan. The CPT plan was approved towards the end of August, 2004 and the test was run on August 31<sup>st</sup> and September 1<sup>st</sup> and 2<sup>nd</sup>, 2004. Due to the long delay in performing the CPT, MPCA decided not to wait for the final test results and approved operating parameter limits prior to public noticing the permit.

## **2.3. Applicability of Minnesota Permitting Rules**

Portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.0515 Standards of Performance for New Indirect Heating Equipment
- Minn. R. 7011.0610 Visible Emission Restrictions for New Facilities
- Minn. R. 7011.1505 Standards of Performance for Storage Vessels
- Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines
- Minn. R. 7011.9990 Volatile Hazardous Air Pollutants

## **2.4. Applicability of New Source Review**

The term “Title I Modification” includes modifications as defined under New Source Review (NSR). For NSR purposes, the change that was made to the source was the installation of an emissions unit (the kiln). The permit amendment issued in 1995 limited NO<sub>x</sub> emissions to below 250 tons per year and limited all other criteria pollutants to below 100 tons per year. Therefore, the source itself was no longer a major source under NSR following the 1995 amendment.

The source is located in an area that is in attainment for all criteria pollutants. Because the facility was non-major, the 250-TPY thresholds are those that apply in determining if the change itself was major.

An applicability determination was conducted during the November 2000 permitting process. It was determined that NSR did not apply to the change made at the facility, and the facility remained non-major.

## **2.5. Applicability of the NESHAP from Hazardous Waste Combustors (40 CFR 63, Subpart EEE).**

### **The MACT Standards**

**Subpart EEE.** National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors. In 1992, EPA created a “source list” of activities for which MACT Standards would be promulgated under 40 CFR 63. The list included hazardous waste combustors. 3M was aware that it would need to make changes to its facility to be able to comply with the upcoming MACT Standards. In preparation to comply, 3M opted to replace its kiln, instead of making changes to its existing kiln.

On April 19, 1996, the hazardous waste combustor MACT Standards (40 CFR 63, Subpart EEE) were proposed. This proposal date occurred while 3M was in the process of making physical changes to its operation.

On September 30, 1999, the MACT Standards themselves (40 CFR 63, Subpart EEE) were promulgated. These standards define “new” as any source commencing construction or reconstruction after the MACT proposal date (i.e., after April 19, 1996). New sources must comply with the MACT Standards upon the combustion of hazardous waste; existing sources must comply by September 30, 2002. The definition of “commenced” includes language stating “that an owner or operator has undertaken a continuous program of construction or reconstruction”.

The MACT standard establishes standards for chlorinated dioxins and furans; mercury; particulate matter (as a surrogate for antimony, cobalt, manganese, nickel, and selenium); semivolatile metals (lead and cadmium); low volatile metals (arsenic, beryllium, and chromium); and hydrogen chloride and chlorine gas (combined). The rule also establishes standards for carbon monoxide, hydrocarbons, and destruction and removal efficiency (DRE) as surrogates in lieu of individual standards for nondioxin/furan organic hazardous air pollutants.

Initial compliance with the rule is documented by stack performance testing. Continued compliance with the carbon monoxide or hydrocarbon standards is documented using a continuous emission monitoring system. For the remaining standards, continued compliance is achieved by monitoring limits on specified operating parameters. These operating parameter

limits are calculated based on performance test conditions using specified procedures intended to ensure that the operating conditions (and by correlation the actual emission) do not exceed performance test levels at any time.

3M is required to conduct comprehensive performance testing, “subsequent performance testing”, every five years and the operating parameter limits must be revised as necessary based on the levels achieved during the subsequent performance test. In addition, 3M must conduct confirmatory performance testing of dioxin/furan emissions under normal conditions midway between subsequent performance tests (every 2.5 years).

EPA intended the requirements of the MACT rule to meet the obligations for hazardous waste combustor air emission standards under two environmental statutes, the Clean Air Act and the Resource Conservation and Recovery Act (RCRA). Historically, the overlapping of Clean Air Act and RCRA requirements has resulted in the duplication of effort. One of the goals of the new MACT standard was to develop a permitting scheme that avoids duplication to the extent possible.

The facility must have a RCRA permit that covers stack air emissions until the facility demonstrates compliance with the MACT standards. The facility will remain subject to the RCRA stack air emission permit until the RCRA permit is modified to delete those conditions. The facility must satisfy both sets of requirements during the relatively short period when both the RCRA and MACT stack air emission standards and associated requirements in the RCRA permit are effective.

EPA decided to place the MACT air emission standards only in the Clean Air Act in subpart EEE and rely on implementation through the air program including the Title V Permit program. MACT air emissions and related operating requirements are to be included in the Title V permit and RCRA permits will be required for all other aspects of the combustion unit and the facility that are governed by RCRA such as material handling and storage, and hazardous waste management units. The Permittee has three years after the promulgation date of the MACT standards (September 30, 1999) to achieve compliance with the emission standards. By the end of the three year period the Permittee will be in compliance with both the MACT standards and the RCRA permit requirements. There is then in effect a transition period during which there will be two sets of standards concerning emissions from the hazardous waste combustor. During this period, in cases where operating parameters and limits are addressed by both programs, the Permittee must comply with all applicable parameters and limits and those which are more stringent will govern.

RCRA section 1006(b) provides authority for the Administrator to eliminate the existing RCRA air emission standards to avoid duplication with the new MACT standards. EPA has chosen to defer RCRA controls on the air emissions to the part 63 MACT standards, which are incorporated into the Title V Permit. The Title V Permit will focus on the operation of the combustion unit (air emissions and related parameters) while the RCRA permit will continue to focus on basic hazardous waste management at the facility. Applicability of RCRA permitting

requirements of 40 CFR 270.19, 270.22, 270.62, and 270.66 do not apply once a source demonstrates compliance with the standards in subpart EEE by conducting a comprehensive performance test and submitting a Notice of Compliance to the permitting authority.

On March 18, 1999, MPCA received a letter from Robert Springer, Director of the Waste, Pesticides and Toxics Division of the EPA. This letter says:

“The HWC-MACT rule is being developed by the USEPA’s Office of Solid Waste and Emergency Response, but the emission standards are being put under 40 CFR Part 63. Once this MACT rule is final and effective, we currently expect that stack emission limits and operating limits for these hazardous waste burning incinerators will begin to transition from the RCRA permits into Air Title V permits over the next few years. The most recent draft of the rule specifies that once a HWC facility meets the MACT standards and certifies compliance, it can petition the Region to remove emission/operating standards from the RCRA permit. At that point, regulation of the facility air emissions would become largely the responsibility of the State air program (note that other waste activities, including waste analysis and closure plans will remain under RCRA).”

There may be situations where it is not clear whether a RCRA compliance standard is less stringent than a MACT requirement; for example due to different averaging periods and different numerical limits. The Permittee should coordinate with the permitting authority early in the MACT process; perhaps when the source submits the RCRA permit application; in order to make a determination as to which requirement is more stringent. Permitting officials are to give sources an appropriate level of flexibility and enforcement discretion when making this determination. The Permittee and the permitting authority are to work together to defer permit conditions governing air emissions standards and operating parameters from RCRA to MACT compliance and to eliminate any RCRA provisions that are no longer needed from the RCRA permit.

To this end, MPCA intended on separating out MACT and RCRA requirements in the new Air and RCRA permits and issue these new separate permits on the same day after 3M submitted their Notification of Compliance. In the fall of 2004, EPA informed the MPCA that issuance of a federal Hazardous Waste permit would be delayed several months until the spring of 2005 at the earliest. Accordingly, MPCA leadership believes that the state hazardous waste permit should best be issued simultaneously with the federal hazardous waste permit in order for the two permits to be consistent or compatible. Questions about issuance of the federal hazardous waste permit, or the technical review to be conducted by EPA staff should be directed to Wen Huang at 312/886-6191 or Jae Lee at 312/696-3781.

MPCA decided to proceed with issuance of a Title V air permit without waiting for issuance of the RCRA permits. MPCA and EPA looked at options for the best way to proceed in separating the permits and how to regulate the facility in the interim period after issuance of the Title V air permit and prior to issuance of the new RCRA permit. The option chosen was to draft a

“Continuation of Expired Permit Letter” which would carry forward the RCRA requirements and allow the air quality requirements expire. To that end, effective the date of issuance of air emissions permit 16300025-001, and subject to the conditions of Minn. R. 7001.0160 “Continuation of Expired Permit”, 3M may continue to conduct its permitted hazardous waste activities in accordance with the terms and conditions of the company’s existing Combined Hazardous Waste Permit Modification, subject to the stipulation that portions of the existing permit dealing with air quality are no longer applicable to the 3M. The portions of the permit that are no longer applicable to 3M will be identified in the Continuation of Expired Permit Letter.

## **2.6. Applicability of the NESHAP from Off-Site Waste and Recovery Operations (40 CFR 63, Subpart DD).**

**Subpart DD.** The Permittee is also subject to Part 63, Subpart DD, National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. This NESHAP covers air emissions from units such as tanks, containers and equipment leaks. Many of the requirements referenced by subpart DD have an identical or very similar counterpart in the Part 264 RCRA regulations and these are listed below. In some cases the RCRA subpart does not apply if a corresponding air NESHAP Subpart applies, and in other cases RCRA allows the Permittee to demonstrate compliance with the RCRA Subpart by demonstrating compliance with the corresponding air NESHAP Subpart. Part 264 subpart CC says that the requirements of subpart CC do not apply if the units are covered under a corresponding Clean Air Act requirement; and Part 264 subpart BB says that equipment subject to a corresponding Clean Air Act requirement may elect to determine compliance by documenting compliance with the relevant Clean Air Act provisions. MPCA will place the requirements of Part 63, subpart DD in the Title V permit and remove the corresponding requirements from the RCRA permit. The way the facility is to be permitted is that units that have the potential to emit to the air will be covered under the air permit and potential leaks and spills to groundwater, surface water, or soils from units will be covered under the RCRA permit.

- Part 63, subpart DD references 40 CFR 63, subpart PP for the management of containers, and the Permittee will demonstrate compliance with Part 63, subpart PP. The requirements of 40 CFR 264.1086, subpart CC do not apply according to 40 CFR 264.1080(b)(7).
- Part 63, subpart DD references 40 CFR 63, subpart OO for the management of Level 1 Tanks, and the Permittee will demonstrate compliance with Part 63, subpart OO. The requirements of 40 CFR 264.1086, subpart CC do not apply according to 40 CFR 264.1080(b)(7).
- Part 63, subpart DD for the management of Level 2 Tanks, and the Permittee will demonstrate compliance with Part 63, subpart DD.
- Part 63, subpart DD references 40 CFR 61, subpart V for the management of Equipment Leaks, and the Permittee will demonstrate compliance with Part 61, subpart V to show compliance with 40 CFR 264, subpart BB.

RCRA Part 264, subpart CC provides the authority to replace Part 264 requirements with corresponding Clean Air Act requirements. 40 CFR 264.1080(b)(7) says “the requirements of this subpart do not apply to the following waste management units at the facility: A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63.” The Permittee must fully comply with all applicable Clean Air Act (CAA) and RCRA permit limits. Where two or more operating limitations apply, the most stringent operating limitations take precedence. Pursuant to 40 CFR § 264.1080(b)(7), the requirements of Part 264 Subpart CC are not included in the U.S. EPA portion of the Permittee’s RCRA permit. The Permittee is required to maintain compliance with the applicable requirements of the Clean Air Act regulations at 40 CFR parts 60, 61, and 63.

Should the Clean Air Act regulations change such that they no longer apply to any unit handling hazardous waste that would have been subject to Part 264 Subpart CC, that unit will become subject to Subpart CC. The RCRA permit will be modified accordingly to include Subpart CC requirements after the Permittee applies to MPCA for a permit modification to include Subpart CC. The Permittee must record and maintain on site the following information for each hazardous waste management unit for which 40 CFR 264.1080(b)(7) was invoked: (1) Certification that the waste management unit is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR parts 60, 61, or 63; (2) Identification of the specific requirements codified under 40 CFR parts 60, 61, or 63 with which the waste management unit is in compliance.

40 CFR § 264.1064(m) allows any of the equipment subject to Part 264, subpart BB that is also subject to the Clean Air Act regulations at 40 CFR Parts 60, 61, or 63 to elect to determine compliance with Subpart BB by documenting compliance with the relevant provisions of 40 CFR Parts 60, 61, or 63. Such documentation shall be kept on file and made available on request by EPA. MPCA will place the requirements of Part 61, subpart V in the Title V Permit. Part 264, subpart BB provides for the Permittee to demonstrate compliance with Subpart BB through Part 61, subpart V.

Also, in the General Provisions of RCRA, the Act provides the guidance on how to integrate RCRA with other Acts. The provisions call for the avoidance of duplication with other Acts including the Clean Air Act.

“RCRA General Provisions; Sec. 6905. - Application of chapter and integration with other Acts  
(b) Integration with other Acts

(1) The Administrator shall integrate all provisions of this chapter for purposes of administration and enforcement and shall avoid duplication, to the maximum extent practicable, with the appropriate provisions of the Clean Air Act (42 U.S.C. 7401 et seq.), the Federal Water Pollution Control Act ... and such other Acts of Congress as grant regulatory authority to the Administrator. Such integration shall be effected only to the extent that it can be done in a manner consistent with the goals and policies expressed in this chapter and in the other acts referred to in this subsection.”

Also, in the General Provisions of RCRA, the Act provides for protection of ambient air quality through compliance with the Clean Air Act.

“Sec. 6907. - Solid waste management information and guidelines

(a) Guidelines: Within one year of October 21, 1976, and from time to time thereafter, the Administrator shall, in cooperation with appropriate Federal, State, municipal, and intermunicipal agencies, and in consultation with other interested persons, and after public hearings, develop and publish suggested guidelines for solid waste management. Such suggested guidelines shall...

(2) not later than two years after October 21, 1976, describe levels of performance, including appropriate methods and degrees of control, that provide at a minimum for...

(D) protection of ambient air quality through compliance with new source performance standards or requirements of air quality implementation plans under the Clean Air Act, as amended (42 U.S.C. 7401 et seq.)”.

## **2.7. Regulatory and/or Statutory Basis of Emission Limit**

Summary of Emission Limit and Regulatory and/or Statutory Basis of the Emission Limit

Stack/Vent I.D.: **1**

Emission Unit: **Hazardous Waste Incinerator**

### **NOx emission limit (Title I Condition)**

Emission Limit and/or Special Conditions: 190 ppm, uncorrected

Factual and legal basis for above: 40 CFR 52.21, to remain a non-major source under New Source Review.

Comments: Rough calculations show that 3M could be a major source of NOx at emission concentrations that are not unrealistically high. Given 3M's stack gas flow rate, a concentration of 190 ppm would result in 244 tons per year of NO<sub>2</sub>. Therefore, a limit of 190 ppm of NOx is set to ensure that 3M's NOx emissions do not exceed 250 tons per year.

3M has requested that the limit be expressed as straight ppm, rather than “ppm dry” or “ppm corrected to 7% oxygen”. For 3M's particular case, the request is reasonable. The purpose of the limit is to remain a minor NSR source. Given their wet scrubbing system and limit on flue gas flow, uncorrected readings represent the worst case in overall tons per year emissions.

### **Sulfur dioxide emission limit (Title I Condition)**

Emission Limit and/or Special Conditions: (1) 95 tons per year, based on a 12-month rolling sum.

Factual and legal basis for above: (1) 40 CFR 52.21, to remain a non-major source under New Source Review.

Comments: 3M wishes to be a New Source Review minor source. Fuel restrictions and pollution control equipment operation requirements have been established to keep emissions below 95 tons per year and therefore below New Source Review thresholds. 3M will use waste stream profiles to calculate monthly sulfur waste feed quantities and 12-month rolling averages. Coupled with the waste feed limit is the requirement to always operate their control equipment as permitted. (The wet scrubber efficiency for sulfur dioxide has been demonstrated at 99.8%) In addition to these two operational requirements, 3M will be asked to stack test to ensure that sulfur dioxide concentrations reflect this tons per year limit.

### **Beryllium emission limit (Title I Condition)**

Emission Limit and/or Special Conditions: 10 grams per 24 hours

Factual and legal basis for above: 40 CFR 61, Subpart C

Comments: The National Emission Standards for Hazardous Air Pollutants found in 40 CFR 61, Subpart C, limits beryllium emissions to 10 grams per day. The regulated list of activities includes incinerators.

### **Particulate matter emission limit**

Emission Limit and/or Special Conditions: (1) 34 mg/dscm (0.015 gr/dscf), corrected to 7 percent oxygen.

Factual and legal basis for above: (1) 40 CFR 63.1203(a)(7)

Comments: Minnesota Rules for Direct Heating Equipment requires particulate matter emissions to be limited to 0.045 grains/cubic foot [Minn. R 7011.0610]. 3M must at all times meet this limit. 3M's potential to emit, if operating continuously at 0.045 grains/cubic foot, would be under 250 tons per year. Although this limit is less stringent than the NESHAP limit described above, it is a federally enforceable Air Quality limit that keeps the facility non-major under New Source Review.

### **Carbon monoxide emission limit**

Emission Limit and/or Special Conditions: (1) 100 ppm, corrected to 7 percent oxygen, averaged over one hour; 94.6 tons/year using a 12-month rolling sum.

Factual and legal basis for above: (1) 40 CFR 63.1203(a)(5); and (2) 40 CFR 52.21, to remain a non-major source under New Source Review.

Comments: Two separate carbon monoxide limits have been set, for two distinct reasons. First, carbon monoxide is used as an indicator of combustion conditions. Since a continuous emission monitor for carbon monoxide is perhaps the single most important monitor of good combustion, a frequently-monitored limit is desirable. A 60-minute limit of 100 parts per million, as measured by a continuous emission monitor, will help to ensure that 3M employs good combustion practices. AQD recognizes that operational fluctuations sometimes causes carbon monoxide emissions to temporarily rise, which is why the 60-minute rolling average (rather

than something shorter) is used. Currently, 3M records emission readings from the carbon monoxide monitor as a 60-minute rolling average, so no change in recordkeeping is required.

Second, carbon monoxide is treated as a pollutant, and is limited to a 94.6 tons/year based on a 12-month rolling sum, for the purpose of remaining below 95 tons per year of emissions and therefore remain a minor source under New Source Review.

### **Volatile Organic Compounds emission limit**

Emission Limit and/or Special Conditions: 20 ppmd measured as total hydrocarbons, corrected to 7 percent oxygen.

Factual and legal basis for above: (a) 40 CFR 52.21, to remain a non-major source under New Source Review; and (b) Minn. Stat. 116.85

Comments: Historically, THC emissions have been on the order of a few parts per million, indicating relatively good organic destruction. 3M will be monitoring for O<sub>2</sub>, and either CO or VOC to demonstrate that there is proper combustion. A VOC limit of 20 ppmd ensures continued organic destruction.

Minnesota Statute 116.85 requires a continuous monitoring system to be installed to ensure optimum dioxin destruction. An O<sub>2</sub>, CO, or VOC monitor would serve as that monitor at this facility to verify that the incinerator and subsequent control equipment are properly operated at all times.

### **Mercury emission limit**

Emission Limit and/or Special Conditions: 50 µg/DSCM, corrected to 7 percent oxygen; 130 µg/DSCM corrected to 7 percent oxygen

Factual and legal basis for above: Minn. Rules pt. 7007.0800, subp. 2, as required by the Commissioner (i.e. this limit was established by the Commissioner for this particular facility). The 130 µg/DSCM limit is from the Subpart EEE NESHAP. The state limit is more stringent and assures compliance with the NESHAP.

3M's mercury limit was updated to reflect the state's concern to limit mercury emissions. The 3M permit limit has been chosen to reflect that of the most tightly-regulated municipal waste combustor in the state. A legal limit on mercury does not exist in Air Quality regulations for a hazardous waste incinerator, so this limit has been established by the Commissioner for the 3M facility. 3M has historically been well within the proposed limits, so the tighter limit will not be burdensome.

### **Dioxins and Furans**

Emission Limit and/or Special Conditions: 0.20 nanograms TEQ/DSCM, corrected to 7 percent oxygen; or 0.40 nanograms TEQ/DSCM corrected to 7 percent oxygen provided that the inlet temperature to the particulate matter control device is 400 degrees F or lower.

Factual and legal basis for above: 40 CFR 63.1203(a)(1)

### **Lead and Cadmium**

Emission Limit and/or Special Conditions: 240.0 µg /DSCM, combined emissions corrected to 7 percent oxygen

Factual and legal basis for above: 40 CFR 63.1203(a)(3)

### **Arsenic, beryllium and chromium**

Emission Limit and/or Special Conditions: 0.20 µg /DSCM, combined emissions corrected to 7 percent oxygen

Factual and legal basis for above: 40 CFR 63.1203(a)(4)

### **Hydrogen chloride emission limit**

Emission Limit and/or Special Conditions: (a) 77 ppm

Factual and legal basis for above: 40 CFR 63.1203(a)(6)

Comments: The current hydrogen chloride limit under RCRA regulations and state hazardous waste rules is reflected in the permit.

### **Opacity limit**

Emission Limit and/or Special Conditions: 20 percent

Factual and legal basis for above: Minn R 7011.0110

Comments: The Permittee of a new emission facility to which parts Minn. R. 7011.0100 to Minn. R. 7011.0115 are applicable shall cause to be discharged into the atmosphere from the facility any gases which exhibit greater than 20 percent opacity. For the purposes of Minn. R. 7011.0110 "new emission facility" means an emission facility on which construction, modification, or reconstruction commenced after January 31, 1977.

### **Destruction and Removal Efficiency (DRE)**

Emission Limit and/or Special Conditions: 99.99 percent DRE

Factual and legal basis for above: 40 CFR 63.1203(c)(1)

### **Acid/Alkaline Fallout**

This provision by and large has been supplanted by the hydrogen chloride and sulfur dioxide limit. It was a condition of the old permit and was carried through newer permits. This requirement has been dropped from the Title V permit.

### **Noise limit**

Emission Limit and/or Special Conditions: (In accordance with the rule)

Factual and legal basis for above: Minn. R. 7030

Comments: Minnesota Rules for noise are found in Chapter 7030. Since the rule can be lengthy when incorporated into a permit, the noise provisions are not spelled out.

### **Oxygen and Carbon Monoxide Monitors**

Comments: Oxygen is used as a diluent gas in determining continuous emissions of particulate matter, carbon monoxide, and total hydrocarbons. All three of these pollutants must have their concentrations corrected to 7% oxygen, so oxygen concentrations must be available to demonstrate compliance. The oxygen monitor fulfills this purpose, and is therefore required.

### **Waste charging rate**

Emission Limit and/or Special Conditions: Waste charging rates (lb/hr) of:

- (1) Total hazardous waste to the kiln – 23,300 using 1-hour rolling average (1-HRA);
- (2) Total pumpable waste to the kiln (pumpable includes solvent plus sludge) – 17,000 using 1-HRA;
- (3) Total hazardous waste and pumpable waste to the Secondary Combustion Chamber – 300 using 1-HRA;
- (5) Chlorine – 754 using 12-hour rolling average (12-HRA);
- (6) Semi-volatile metals, Pb, Cd – 3 using 12-HRA; and
- (7) Low-volatile metals, As, Be, Cr – 15 using 12-HRA
- (8) Ash – 3,400 fed to the system using 1-HRA
- (9) Mercury – 0.0060 fed to the system using 12-HRA

Factual and legal basis for above: To ensure that operation remains within emission limits

Comments: The incinerator is rated at 120 mmBtu/hr. Given 3M's variability in its incineration waste stream, a determination of the heating value from the waste stream side is very difficult. Waste feed rates, in terms of pounds per hour, are used as a surrogate. The chlorine limit is present to ensure that acid gas emission limits are not exceeded. The Permittee has chosen to comply with a minimum gas flowrate limit and a maximum federate limit of mercury from all feedstreams that ensures the maximum theoretical emissions concentration (MTEC) is below the emission limit in accordance with 40 CFR 63.1207(m)(4).

### **Temperature limits**

Emission Limit and/or Special Conditions: (1) Mixing Chamber Temperature: minimum 1620°F using 1-HRA; and (2) Secondary Combustion Chamber Temperature: minimum 1710°F using 1-HRA.

Factual and legal basis for above: Results of Trial Burn

Comments: The trial burn showed that Destruction and Removal efficiencies can be met at these temperatures.

### **Flue gas flow rate limits**

Emission Limit and/or Special Conditions: Flue gas flow rate: not to exceed 40,000 dry standard cubic feet per minute using 1-HRA and no less than 33,100 dry standard cubic feet per minute using 12-HRA.

Factual and legal basis for above: To remain within permitted potential to emit limits and to comply with the MTEC under 40 CFR 63.1207(m)(4).

Comments: During the trial burn, the flow rate was 40,210 dscfm. After adjusting this flow rate to two significant digits, it still remains as 40,000 dscfm. 3M imposed this limit on themselves in past permits. Fan operation is used as a surrogate for flow rate, and a new fan curve is established with each compliance test. "Dry standard cubic feet", rather than simply "standard cubic feet", is acceptable in 3M's case, since flue gas temperature is uniform and is always saturated with water.

### **Atomization Pressure limit**

Emission Limit and/or Special Conditions: Minimum atomization pressure: minimum 31 PSIG in the burner and the lances.

Factual and legal basis for above: Results of Trial Burn, 40 CFR 63.1209(j)(4)

**Air Pollution Control Equipment Operating Parameters:** A majority of the changes incorporated through this permit are derived from the Trial Burn or Performance Test(s) conducted at the facility. 3M requested that Operating Parameter Limits (OPLs) be listed in the permit with no more than three significant figures and MPCA agreed. For example, temperature limits from testing of 1619 F and 1708 F are in the permit as 1620 F and 1710 F respectively.

**Minimum blowdown from quench and subcooler combined:** 192 gpm using 1-HRA (established during the most recent trial burn/performance test).

Factual and legal basis for above: Minn. R. 7007.0800, subp. 14

Comments: Established during the most recent trial burn/performance test.

**Quench recirculation water flow:** The old permit had a limit of recirculation water flow. The Permittee indicated that a Maximum Quench exit temperature would be a better indicator of Venturi Quench performance than the recirculation water flow, and that temperature is 182 degrees F. The permit also includes a minimum combined blow down rate from the quench and the subcooler of 192 gpm using 1-HRA as noted above.

Factual and legal basis for above: Minn. R. 7007.0800, subp. 14

Comments: Established during the most recent trial burn/performance test.

**Subcooler recirculation water flow:** 3,200 gpm using 1-HRA (established during the most recent trial burn/performance test, and adjusting this flow rate to two significant digits).

Factual and legal basis for above: Minn. R. 7007.0800, subp. 14

Comments: Established during the most recent trial burn/performance test.

**Subcooler water pressure:** 19.4 psi using 1-HRA (established during the most recent trial burn/performance test).

Factual and legal basis for above: 40 CFR 63.1209(m)

Comments: Established during the most recent trial burn/performance test.

**Minimum subcooler pH:** pH of 1.2 using 1-HRA (established during the most recent trial burn/performance test).

Factual and legal basis for above: Minn. R. 7007.0800, subp. 14

Comments: Established during the most recent trial burn/performance test.

**Minimum make-up flowrate to the M1:** 120 gpm using 1-HRA (established during the most recent trial burn/performance test).

Factual and legal basis for above: Minn. R. 7007.0800, subp. 14

Comments: Established during the most recent trial burn/performance test.

**Minimum pressure drop for the M1:** 16 inches of water column using 1-HRA (established during the most recent trial burn/performance test).

Factual and legal basis for above: Minn. R. 7007.0800, subp. 14

Comments: Established during the most recent trial burn/performance test.

**Minimum liquid to gas ratio for the M1 module:** 40.6 gallons per 1000 cubic feet using 1-HRA (established during the most recent trial burn/performance test).

Factual and legal basis for above: Minn. R. 7007.0800, subp. 14

Comments: Established during the most recent trial burn/performance test.

**WESP (Wet Electro Static Precipitator) Power:** 4.99 kW using 1-HRA (established during the most recent trial burn/performance test).

Factual and legal basis for above: Minn. R. 7007.0800, subp. 14

Comments: Established during the most recent trial burn/performance test.

**Table 3. Regulatory Overview of Facility**

EU, GP, or SV	Applicable Regulations	Comments:
GP001	40 CFR 61.242	Equipment leaks subject to Subpart V
GP002	40 CFR 63.920	Containers subject to Subpart PP

GP003	40 CFR 63.900	Tanks subject to Subpart OO
GP004	40 CFR 63.685	Tanks subject to Subpart DD
EU008	40 CFR 63, Subpart EEE	National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors.
EU008	Minn. R. 7011.0515	Indirect Heating Equipment rule limit ensures facility is non-major for NSR
EU008	Minn. R. 7011.0110, subp. 2 has been added	The boiler rule contained an opacity standard. Because the new kiln has no boiler, the general opacity rule was included.
FC	40 CFR 63, Subpart DD	National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations.

### 3. Technical Information

- Screen Level Analysis

A screen level analysis of the facilities potentially eligible for the Mid-Flex permit was performed by the Air Modeling Unit. They looked at predicted ambient levels and compared them with the NAAQS. The 249 facilities analyzed included all facilities whose actual emissions were less than 90% of federal part 70 permitting thresholds. Further screening was completed for the 18 facilities that did not pass the initial screen modeling for CO, lead, and NOx. The 3M Hazardous Waste Combustor facility was one of the facilities modeled and it was found that the data indicated the need for a closer look at PM-10. For these three pollutants, the modeling group re-modeled the 18 facilities using actual stack-by-stack emissions as well as stack parameters from Delta, but all other assumptions remained the same (e.g., 50 meters to property line, 1 meter difference between building and stack height, etc.). The CO exceedances were resolved as well as several of the NOx exceedances. However, the predicted ambient concentrations actually increased for some facilities when they modeled their actual stack parameters.

Under Minnesota rules, we cannot issue a permit to a facility where we have knowledge that the permitted operation violates the NAAQS. We are legally obligated to impose the necessary conditions to ensure compliance with the NAAQS.

It was decided that permit engineers should obtain facility specific emissions data for each of the applicable pollutants such as allowable emission rates in lb/hr and TPY as appropriate for each stack or a representative stack for a group, and obtain facility specific dispersion parameters for each stack or a representative stack for a group.

An analysis of the PM10 emissions for this facility was done using the actual stack parameters to determine whether there was a potential to exceed the PM10 standards. The stack height and distance to the property line are considerably higher than assumed for the screening analysis done previously. Using the actual stack parameters and distance to the property line, and the

hourly potential emissions and the limited annual potential emissions, the PM10 standards were not threatened.

- Emission calculations

Emissions calculations are attached to this permit as Appendix 4

- A list of insignificant activities that are required to be listed in a permit application is attached as Appendix 5.

**3.1 Calculations of Potential to Emit**

Appendix 4 to this TSD contains Form GI-07, which summarizes the PTE of the Facility and spreadsheets and supporting information prepared by the MPCA and the Permittee.

**3.2 Periodic Monitoring**

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

In evaluating the monitoring included in the permit, the MPCA considers the following:

- The likelihood of violating the applicable requirements;
- Whether add-on controls are necessary to meet the emission limits;
- The variability of emissions over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic feasibility of possible periodic monitoring methods; and
- The kind of monitoring found on similar units elsewhere:

Table 4 summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

**Table 4. Periodic Monitoring**

<b>Emission Unit or Group</b>	<b>Requirement (basis)</b>	<b>Additional Monitoring</b>	<b>Discussion</b>
Equipment Leaks Subject to Subpart V: GP 001	40 CFR 61.242	Leak detection monitoring, visual inspections, operating standards	Compliance with Subpart V will be determined by review of records, review of performance test results and inspections. All of the equipment subject to Subpart V is also subject to Part 264 Subpart BB. Part 264 Subpart BB allows that if any of the

<b>Emission Unit or Group</b>	<b>Requirement (basis)</b>	<b>Additional Monitoring</b>	<b>Discussion</b>
			equipment subject to Part 264 Subpart BB is also subject to the CAA regulations at 40 CFR Parts 60, 61, or 63, then 40 CFR Part 264.1064(m) allows the Permittee to elect to determine compliance with Subpart BB by documenting compliance with the relevant provisions of 40 CFR Parts 60, 61, or 63. Such documentation of compliance with Part 61 Subpart V shall be kept at the facility and made available for inspection.
Containers Subject to Subpart PP: GP 002	40 CFR 63.920	Operating standards	Permittee shall follow the packaging and handling requirements and perform inspections according to Subpart PP.
Tanks Subject to Subpart OO: GP 003	40 CFR 63.900	Design Criteria, Inspections and Performance Testing	The Permittee shall follow the design criteria and test methods and procedures of Subpart OO.
Tanks Subject to Subpart DD: GP 004	40 CFR 63.680	Design Criteria and Inspections	The Permittee shall follow the design criteria and inspection requirements of Subpart DD.
Replacement Rotating Kiln: EU 008	40 CFR 63, Subpart EEE, Emissions Limits, Feedrate Limits, Operating Limits	Recordkeeping, Performance Testing, Operating Requirements, Monitoring	This unit incorporates continuous emission monitoring systems (CEMs) and other continuous monitoring systems (CMS) such as thermocouples, pressure transducers, and flow meters.

### **3.3 Insignificant Activities**

3M has several operations which are classified as insignificant activities. These are listed in Appendix 5 to the permit.

### **3.4 Permit Organization**

