



**AIR EMISSION PERMIT NO. 16300025-002**

**IS ISSUED TO**

3M Co

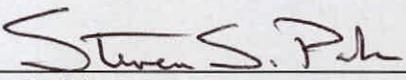
**3M - Cottage Grove Corporate Incinerator**  
10746 Innovation Road  
Cottage Grove, Washington County, MN 55016

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	Issue Date	Action
Total Facility Operating Permit Reissuance	August 18, 2009	See Below	002
Major Amendment	February 5, 2009		

This permit amendment supersedes Air Emission Permit No. 16300025-002 and 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 are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

**Permit Type:** Federal; Part 70/Limits to Avoid NSR  
**Issuance Date:** June 28, 2012  
**Expiration:** June 28, 2017  
Title I Conditions do not expire.

  
Don Smith, P.E., Manager  
Air Quality Permits Section  
Industrial Division

for John Linc Stine  
Commissioner  
Minnesota Pollution Control Agency

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**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 permit is an air permit only. The facility also has a separate RCRA hazardous waste permit. The 3M Corporate Incinerator provides treatment and storage of hazardous waste generated by 3M's operating divisions throughout North America, non-3M waste with high BTU value as defined in Part II.B.2. of the hazardous waste permit, and wastes from Minnesota law enforcement agencies as defined in Part II.B.3. of the hazardous waste permit for the facility. 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 SCC is 60 feet high and has a shell diameter of 20 feet. It provides additional residence time to combust off-gases of organic wastes. The SCC burners have been removed, and the burner inlets are welded shut, which has reduced the overall capacity of the incinerator. 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.

**AMENDMENT DESCRIPTION:**

This permit amendment is a reissuance of the operating permit, and a major amendment to allow additional sources of non-3M hazardous waste for incineration in the kiln. The additional outside sources will include high Btu waste or wastes from Minnesota law-enforcement agencies as defined in Part II.B.2. and Part II.B.3. of the hazardous waste permit for the facility.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator  
 Permit Number: 16300025 - 002

**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
<b>SOURCE-SPECIFIC REQUIREMENTS</b>	
	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
<b>OPERATIONAL REQUIREMENTS</b>	
	hdr
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
Permit Appendices: This permit contains appendices as listed in the Table of Contents. The Permittee shall comply with all requirements contained in the appendices.	Minn. R. 7007.0800, subp. 2
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.	Minn. R. 7007.0800, subps. 2 & 16(J); 40 CFR 64.7
Operation and Maintenance (O&M) Plan: Retain at the stationary source an O&M plan for all air pollution control equipment. At a minimum, the O&M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subps. 14 & 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
<b>MONITORING REQUIREMENTS</b>	
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Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment, not to exceed 12 months from the previous calibration.	Minn. R. 7007.0800, subp. 4(D); 40 CFR 64.7
Operation of Monitoring Equipment: Unless otherwise noted in Table A, 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); 40 CFR 64.7

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Table A.	Minn. R. ch. 7017
Performance Test Notifications and Submittals:  Performance Tests are due as outlined in Table A of the permit.  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 - CD 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. R. 7017.2018; Minn. R. 7017.2030, subps. 1-4; Minn. R. 7017.2035, subps. 1-2
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change. If a new limit is required to be set, it shall be based on the average of the test run averages during the stack test, unless otherwise specified in an applicable requirement.	Minn. R. 7017.2025
RECORDKEEPING	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)
If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. These records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the office of the stationary source for all other years. The records may be maintained in either electronic or paper format.	Minn. R. 7007.1200, subp. 4
REPORTING/SUBMITTALS	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 owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator 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 owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

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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; Minn. Stat. Section 116.061
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. 7007.1150-7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 - 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 on or before April 1 of each calendar year following permit issuance, to be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 - 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 - 7002.0095
The Permittee shall submit a Part 1 MACT application within 30 days of startup of any 112(j) affected source. The application shall meet the requirements of 40 CFR Section 63.53(a).  The Permittee shall submit a Part 2 MACT application within 90 days of startup of any 112(j) affected source. The application shall meet the requirements of 40 CFR Section 63.53(b).  112(j) affected source is defined in 40 CFR Section 63.51. As of permit issuance, 112(j) affected sources include industrial, commercial, and institutional boilers and process heaters; brick and structural clay products manufacturing; and clay ceramics manufacturing.	40 CFR 63.52(b)(1) & (e)(1)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

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**Subject Item: GP 001 Equipment Leaks Subject to Subpart V - National Emission Standards for Equipment Leaks**

**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
The Permittee shall demonstrate compliance with the standards of Subpart V 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 63.691(b)(1); 40 CFR 61.242-1(a); Minn. R. 7011.9990
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); Minn. R. 7011.9990
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.  If the Administrator makes a determination that a means of emission limitation is at least a permissible alternative to the above requirements, the Permittee shall comply with the requirements of that determination.	40 CFR 61.242-1(c)
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); Minn. R. 7011.9990
Equipment that is in vacuum service is excluded from the standards of this subpart if it is identified as required in 40 CFR 61.246(e)(5).	40 CFR 61.242-1(e); Minn. R. 7011.9990
STANDARDS: -- PUMPS	40 CFR 61.242-2
Each pump shall be monitored monthly to detect leaks by the methods specified in the Test Methods of this subpart, except as provided in 40 CFR 61.242-1(c) and 40 CFR 61.242-2(d)-(g).  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); Minn. R. 7011.9990
Leak Detection - A leak is detected when: - An instrument reading of 10,000 ppm or greater is measured; or - If there are indications of liquids dripping from the pump seal.	40 CFR 61.242-2(b); Minn. R. 7011.9990
Leak Detection - Repairs: - 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 by the Delay of Repair standard. - 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); Minn. R. 7011.9990
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)-(b), provided the following requirements are met. 1. 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 - 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); Minn. R. 7011.9990
2. 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. 3. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.	(continued)
4. 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 to determine the presence of VOC and VHAP in the barrier fluid as specified by the Test Methods. - 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. 5. Each sensor, as described in 3. above, is checked daily or is equipped with an audible alarm.	(continued)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

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<p>6. 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.</p> <ul style="list-style-type: none"> <li>- If indications of liquids dripping from the pump seal exceed the criteria established above, or if, based on the criteria established above, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.</li> <li>- 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 by the Delay of Repair standard.</li> <li>- A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.</li> </ul>	<p>(continued)</p>
<p>Any pump that is designated, as described in section 246(e)(2), for no detectable emissions, as indicated by an instrument reading of &lt; 500 ppm above background, is exempt from the requirements of sections 242-2(a), (c) &amp; (d) if the pump:</p> <ul style="list-style-type: none"> <li>- Has no externally actuated shaft penetrating the pump housing;</li> <li>- Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of &lt; 500 ppm above background, as measured by the method specified in paragraph (c) of the Test Methods; and</li> <li>- Is tested for compliance with these emissions initially upon designation, annually, and at other times requested by the Administrator.</li> </ul>	<p>40 CFR 61.242-2(e); Minn. R. 7011.9990</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, it is exempt from the requirements of 40 CFR 61.242-2(a)-(e).</p>	<p>40 CFR 61.242-2(f); Minn. R. 7011.9990</p>
<p>Any pump that is designated, as described in section 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)-(6) if the Permittee:</p> <ul style="list-style-type: none"> <li>- 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</li> <li>- 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.</li> </ul>	<p>40 CFR 61.242-2(g); Minn. R. 7011.9990</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); Minn. R. 7011.9990</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 paragraph (c) of the Test Methods.</p>	<p>40 CFR 61.242-4(a); Minn. R. 7011.9990</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 by the Delay of Repair standard.</p> <p>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 paragraph (c) of the Test Methods.</p>	<p>40 CFR 61.242-4(b); Minn. R. 7011.9990</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)-(b).</p>	<p>40 CFR 61.242-4(c); Minn. R. 7011.9990</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)-(b), provided the Permittee complies with the following requirement:</p> <ul style="list-style-type: none"> <li>- 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 the Delay or Repair standard.</li> </ul>	<p>40 CFR 61.242-4(d); Minn. R. 7011.9990</p>
<p>STANDARDS: -- SAMPLING CONNECTING SYSTEMS</p>	<p>40 CFR 61.242-5</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator  
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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.	40 CFR 61.242-5(a); Minn. R. 7011.9990
Each closed-purge, closed-loop, or closed vent system as required above shall comply with the following requirements: 1. Return the purged process fluid directly to the process line; or 2. Collect and recycle the purged process fluid; or 3. 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	40 CFR 61.242-5(b); Minn. R. 7011.9990
4. 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 - 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.	(continued)
In-situ sampling systems and sampling systems without purges are exempt from the requirements of 40 CFR 61.242-5(a)-(b).	40 CFR 61.242-5(c); Minn. R. 7011.9990
STANDARDS: -- OPEN-ENDED VALVES OR LINES	40 CFR 61.242-6
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). 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.	40 CFR 61.242-6(a); Minn. R. 7011.9990
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.	40 CFR 61.242-6(b); Minn. R. 7011.9990
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.	40 CFR 61.242-6(c); Minn. R. 7011.9990
The following are exempt from the requirements of 40 CFR 61.242-6(a)-(c): - Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset. - 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)-(c).	40 CFR 61.242-6(d)-(e); Minn. R. 7011.9990
STANDARDS: -- VALVES	40 CFR 61.242-7
Each valve shall be monitored monthly to detect leaks by the method specified in the Test Methods of this subpart and shall comply with the leak detection requirements below. Exceptions are provided in paragraphs (f)-(h), and the alternative standards in section 243 and section 242-1(c).	40 CFR 61.242-7(a); Minn. R. 7011.9990
Leak Detection - A leak is detected when: - An instrument reading of 10,000 ppm or greater is measured.	40 CFR 61.242-7(b); Minn. R. 7011.9990
Leak Detection - Monitoring: - 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. - If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.	40 CFR 61.242-7(c); Minn. R. 7011.9990
Leak Detection - Repairs: - 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 the Delay of Repair section of this subpart. - A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.	40 CFR 61.242-7(d)-(e); Minn. R. 7011.9990
First attempts at repair include, but are not limited to, the following best practices where practicable: - Tightening of bonnet bolts; - Replacement of bonnet bolts; - Tightening of packing gland nuts; and - Injection of lubricant into lubricated packing.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

<p>Any valve that is designated, as described in section 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> <ul style="list-style-type: none"> <li>- Has no external actuating mechanism in contact with the process fluid;</li> <li>- Is operated with emissions less than 500 ppm above background, as measured by the method specified in the test methods of this subpart; and</li> <li>- Is tested for compliance with these emissions initially upon designation, annually, and at other times requested by the Administrator.</li> </ul>	<p>40 CFR 61.242-7(f); Minn. R. 7011.9990</p>
<p>Any valve that is designated, as described in section 246(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of 40 CFR 61.242-7(a) if:</p> <ul style="list-style-type: none"> <li>- 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</li> <li>- The Permittee has a written plan that requires monitoring of the valve as frequent as practicable during safe-to-monitor times.</li> </ul>	<p>40 CFR 61.242-7(g); Minn. R. 7011.9990</p>
<p>Any valve that is designated, as described in section 246(f)(2), as a difficult-to-monitor valve is exempt from the requirements of 40 CFR 61.242-7(a) if:</p> <ul style="list-style-type: none"> <li>- The Permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;</li> <li>- The process unit within which the valve is located is an existing process unit; and</li> <li>- The Permittee follows a written plan that requires monitoring of the valve at least once per calendar year.</li> </ul>	<p>40 CFR 61.242-7(h); Minn. R. 7011.9990</p>
<p><b>ALTERNATIVE STANDARDS FOR VALVES IN VHAP SERVICE</b> -- 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); Minn. R. 7011.9990</p>
<p>The following requirements shall be met if the Permittee decides to comply with an allowable percentage of valves leaking:</p> <ul style="list-style-type: none"> <li>- 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).</li> <li>- A performance test as specified below shall be conducted initially upon designation, annually, and at other times requested by the Administrator.</li> <li>- If a valve leak is detected, it shall be repaired in accordance with the Leak Detection standards above.</li> </ul>	<p>40 CFR 61.243-1(b); Minn. R. 7011.9990</p>
<p>Performance tests shall be conducted in the following manner:</p> <ul style="list-style-type: none"> <li>- All valves in VHAP service within the process unit shall be monitored within 1 week by the methods specified in the Test Methods of this subpart.</li> <li>- If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.</li> <li>- 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.</li> </ul>	<p>40 CFR 61.243-1(c); Minn. R. 7011.9990</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); Minn. R. 7011.9990</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); Minn. R. 7011.9990</p>
<p><b>ALTERNATIVE STANDARDS FOR VALVES IN VHAP SERVICE</b> -- 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 the next requirement.</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); Minn. R. 7011.9990</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

<p>The Permittee shall comply initially with the requirements for valves, as described in 40 CFR 61.242-7.</p> <ol style="list-style-type: none"> <li>1. 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; or</li> <li>2. 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.</li> </ol> <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); Minn. R. 7011.9990</p>
<p>STANDARDS: -- PRESSURE RELIEF SERVICES IN LIQUID SERVICE AND CONNECTORS</p>	<p>40 CFR 61.242-8</p>
<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 Permittee shall follow either one of the following procedures, except as provided in 40 CFR 61.242-1(c):</p> <ul style="list-style-type: none"> <li>- 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 Leak Detection and repair requirements of this section; or</li> <li>- The Permittee shall eliminate the visual, audible, olfactory, or other indication of a potential leak.</li> </ul>	<p>40 CFR 61.242-8(a); Minn. R. 7011.9990</p>
<p>Leak Detection - A leak is detected when: - An instrument reading of 10,000 ppm or greater is measured.</p>	<p>40 CFR 61.242-8(b); Minn. R. 7011.9990</p>
<p>Leak Detection - Repairs: - 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 by the Delay of Repair standard. - The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.</p> <p>First attempts at repair include, but are not limited to, the following best practices where practicable:</p> <ul style="list-style-type: none"> <li>- Tightening of bonnet bolts;</li> <li>- Replacement of bonnet bolts;</li> <li>- Tightening of packing gland nuts; and</li> <li>- Injection of lubricant into lubricated packing.</li> </ul>	<p>40 CFR 61.242-8(c)-(d); Minn. R. 7011.9990</p>
<p>STANDARDS: -- DELAY OF REPAIR</p>	<p>40 CFR 61.242-10</p>
<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>	<p>40 CFR 61.242-10(a); Minn. R. 7011.9990</p>
<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>	<p>40 CFR 61.242-10(b); Minn. R. 7011.9990</p>
<p>Delay of repair for valves will be allowed if: - The Permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and - 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); Minn. R. 7011.9990</p>
<p>Delay of repair for pumps will be allowed if: - Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and - 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); Minn. R. 7011.9990</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); Minn. R. 7011.9990</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 following procedures:</p>	<p>40 CFR 61.244(a)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

<p>1. Where the standard is an equipment, design, or operational requirement:</p> <ul style="list-style-type: none"> <li>- The Permittee who applies 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.</li> <li>- 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.</li> </ul>	<p>40 CFR 61.244(b)</p>
<p>2. Where the standard is a work practice:</p> <ul style="list-style-type: none"> <li>- The Permittee shall be responsible for collecting and verifying test data for an alternative means of emission limitation.</li> <li>- For each source the emission reduction achieved by the required work practices shall be demonstrated for a minimum period of 12 months.</li> <li>- For each source the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.</li> <li>- 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.</li> </ul>	<p>40 CFR 61.244(c)</p>
<ul style="list-style-type: none"> <li>- 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).</li> <li>- 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.</li> </ul>	<p>(continued)</p>
<p>3. The Permittee may offer a unique approach to demonstrate the alternative means of emission limitation.</p>	<p>40 CFR 61.244(d)</p>
<p>4. 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. The Administrator will grant permission according to the provisions of 40 CFR 61.244(b)-(d).</p>	<p>40 CFR 61.244(e)</p>
<p><b>TEST METHODS AND PROCEDURES</b></p>	<p>40 CFR 61.245</p>
<p>The Permittee shall use the test methods and procedures listed in 40 CFR 61.245 for determining compliance with subpart V.</p>	<p>40 CFR 61.245; Minn. R. 7011.9990</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% 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 shall be used.</p>	<p>40 CFR 61.245(d)(1); Minn. R. 7011.9990</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% by weight, provided that the engineering judgment demonstrates that the VHAP content clearly does not exceed 10% 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. 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); Minn. R. 7011.9990</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); Minn. R. 7011.9990</p>
<p><b>RECORDKEEPING REQUIREMENTS</b></p>	<p>40 CFR 61.246</p>
<p>The Permittee may use one recordkeeping system which identifies each record by each process unit to comply with the requirements of all units subject to this subpart.</p>	<p>40 CFR 61.246(a)(2); Minn. R. 7011.9990</p>
<p>When each leak is detected as specified in GP 001, the following apply:</p> <ul style="list-style-type: none"> <li>- A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.</li> <li>- 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.</li> <li>- The identification on equipment, except on a valve, may be removed after it has been repaired.</li> </ul>	<p>40 CFR 61.246(b); Minn. R. 7011.9990</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

<p>When each leak is detected as specified in GP 001, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:</p> <ul style="list-style-type: none"> <li>- The instrument, operator, and equipment identification numbers.</li> <li>- The date the leak was detected and the dates of each attempt to repair the leak.</li> <li>- Repair methods applied in each attempt to repair the leak.</li> <li>- "Above 10,000" if the maximum instrument reading measured by the methods specified in the Test Methods standard after each repair attempt is equal to or greater than 10,000 ppm.</li> <li>- "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.</li> </ul>	<p>40 CFR 61.246(c); Minn. R. 7011.9990</p>
<ul style="list-style-type: none"> <li>- The signature of the designate whose decision it was that repair could not be effected without a process shutdown.</li> <li>- The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.</li> <li>- Dates of process unit shutdowns that occur while the equipment is unrepaired.</li> <li>- The date of successful repair of the leak.</li> </ul>	<p>(continued)</p>
<p>For all equipment to which a standard applies, the following information shall be recorded in a log that is kept readily accessible:</p> <ol style="list-style-type: none"> <li>1. A list of identification numbers for equipment (except welded fittings) subject to the requirements of subpart V.</li> <li>2. 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. The designation of this equipment for no detectable emissions shall be signed by the Permittee.</li> <li>3. A list of equipment identification numbers for pressure relief devices complying with 40 CFR 61.242-4(a).</li> <li>4. The dates of each compliance test required in GP 001.             <ul style="list-style-type: none"> <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> </li> <li>5. A list of identification numbers for equipment in vacuum service.</li> </ol>	<p>40 CFR 61.246(e); Minn. R. 7011.9990</p>
<p>The following information pertaining to all valves subject to the requirements of 40 CFR 61.242-7(g)&amp;(h) (unsafe-/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> <ul style="list-style-type: none"> <li>- 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.</li> <li>- 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.</li> </ul>	<p>40 CFR 61.246(f); Minn. R. 7011.9990</p>
<p>The following information shall be recorded for valves complying with 40 CFR 61.243-2 (skip period leak detection and repair):</p> <ul style="list-style-type: none"> <li>- A schedule of monitoring.</li> <li>- The percent of valves found leaking during each monitoring period.</li> </ul>	<p>40 CFR 61.246(g); Minn. R. 7011.9990</p>
<p>The following information shall be recorded in a log that is kept in a readily accessible location:</p> <ul style="list-style-type: none"> <li>- Design criterion required in 40 CFR 61.242-2(d), and an explanation of the design criterion; and</li> <li>- Any changes to this criterion and the reasons for the changes.</li> </ul>	<p>40 CFR 61.246(h); Minn. R. 7011.9990</p>
<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> <ul style="list-style-type: none"> <li>- An analysis demonstrating the design capacity of the process unit, and</li> <li>- An analysis demonstrating that equipment is not in VHAP service.</li> </ul>	<p>40 CFR 61.246(i); Minn. R. 7011.9990</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); Minn. R. 7011.9990</p>
<p><b>REPORTING REQUIREMENTS</b></p>	<p>40 CFR 61.247</p>
<p>The Permittee 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 for any piece of equipment to which subpart V applies. This statement shall be submitted with the application for approval of construction and shall 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)(1); Minn. R. 7011.9990</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator  
 Permit Number: 16300025 - 002

<p>A report shall be submitted to the Administrator semiannually that includes the following information:</p> <ol style="list-style-type: none"> <li>1. Process unit identification.</li> <li>2. For each month during the semiannual reporting period, report the number of:                     <ul style="list-style-type: none"> <li>- Valves for which leaks were detected as described in 40 CFR 61.242-7(b) or 40 CFR 61.243-2;</li> <li>- Valves for which leaks were not repaired as required in 40 CFR 61.242-7(d).</li> <li>- Pumps for which leaks were detected as described in 40 CFR 61.242-2(b)&amp;(d)(6).</li> <li>- Pumps for which leaks were not repaired as required in 40 CFR 61.242-2(c)&amp;(d)(6).</li> </ul> </li> </ol>	<p>40 CFR 61.247(b); Minn. R. 7011.9990</p>
<ol 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> <li>3. Dates of process unit shutdowns which occurred within the semiannual reporting period.</li> <li>4. 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.</li> <li>5. The results of all performance tests and monitoring to determine compliance with no detectable emissions and with CFR 61.243-1 &amp; 61.243-2 conducted within the semiannual reporting period.</li> </ol>	<p>(continued)</p>
<p>The semiannual reports shall be submitted according to the schedule specified in the initial report, unless a revised schedule has been submitted in a previous semiannual report.</p>	<p>40 CFR 61.247(c); Minn. R. 7011.9990</p>
<p>If the Permittee elects to comply with the provisions of 40 CFR 61.243-1 and 61.243-2 (alternative standards for valves), the Permittee shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.</p>	<p>40 CFR 61.247(d); Minn. R. 7011.9990</p>
<p>An application for approval of construction or modification, 40 CFR 61.05(a) and 61.07, will not be required if:</p> <ul style="list-style-type: none"> <li>- The new source complies with the standard, 40 CFR 61.242;</li> <li>- The new source is not part of the construction of a process unit; and</li> <li>- In the next semiannual report required by 40 CFR 61.247(b) the information in 40 CFR 61.247(a)(5) is reported.</li> </ul>	<p>40 CFR 61.247(e); Minn. R. 7011.9990</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

**Subject Item: GP 002 Containers Subject to Subpart PP - National Emission Standards for Containers**

**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 which require Level 1 or 2 controls as required by 40 CFR 63.688.	40 CFR 63.920; Minn. R. 7011.7400, subp. C
STANDARDS -- Container Level 1 Controls	40 CFR 63.922
A container using Container Level 1 controls is one of the following: 1. 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).	40 CFR 63.922(b) (40 CFR 63.922(b)(1)); Minn. R. 7011.7400, subp. C
2. 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. 3. 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.	(continued) (40 CFR 63.922(b)(2)&(3)); Minn. R. 7011.7400, subp. C
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 the container on which the cover is installed.	40 CFR 63.922(c); Minn. R. 7011.7400, subp. C
STANDARDS -- Container Level 2 Controls	40 CFR 63.923
A container using Container Level 2 controls is one of the following: 1. A container that meets the applicable U.S. DOT regulations on packaging hazardous materials for transportation as specified in 40 CFR 63.923(f). 2. A container that has been demonstrated to operate with no detectable organic emissions as defined in 40 CFR 63.921. 3. A container that has been demonstrated within the preceeding 12 months to be vapor-tight by using Method 27 in Appendix A of 40 CFR part 60 in accordance with the proceedure specified in 40 CFR 63.925(b).	40 CFR 63.923(b); Minn. R. 7011.7400, subp. C
Transfer of regulated-material in to or out of a container using Container Level 2 controls shall be conducted in such a manner as to minimize exposure of the regulated-material to the atmosphere, to the extent practical, considering the physical properties of the regulated-material and good engineering and safety practices for handling flammable, ignitable, explosive, or other hazardous materials.	40 CFR 63.923(c); Minn. R. 7011.7400, subp. C
COVERS AND CLOSURE DEVICES	hdr
Whenever a regulated-material is in a container using Container Level 1 or 2 controls, install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows: 1. Opening of a closure device or cover is allowed for the purpose of adding material to the container as follows: - 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); 40 CFR 63.923(d); Minn. R. 7011.7400, subp. C
- 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.	(continued) (40 CFR 63.922(d)(1)(ii); 40 CFR 63.923(d)(1)(ii)); Minn. R. 7011.7400, subp. C

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

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<p>2. Opening of a closure device or cover is allowed for the purpose of removing material from the container in the case when discrete quantities or batches of material are removed from the container. 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.</p> <p>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).</p>	<p>(continued)                  (40 CFR 63.922(d)(2);                  40 CFR 63.923(d)(2));                  Minn. R. 7011.7400, subp. C</p>
<p>3. 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. Upon 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.</p>	<p>(continued)                  (40 CFR 63.922(d)(3);                  40 CFR 63.923(d)(3));                  Minn. R. 7011.7400, subp. C</p>
<p>4. 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.</p> <p>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>(continued)                  (40 CFR 63.922(d)(4);                  40 CFR 63.923(d)(4));                  Minn. R. 7011.7400, subp. C</p>
<p>5. 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>(continued)                  (40 CFR 63.922(d)(5);                  40 CFR 63.923(d)(5));                  Minn. R. 7011.7400, subp. C</p>
<p>A container that meets the applicable U.S. DOT regulations on packaging hazardous materials for transportation shall meet the following requirements:</p> <ol style="list-style-type: none"> <li>1. The container must meet the applicable requirements specified in 49 CFR 178 -- Specifications for Packagings or 49 CFR 179 -- Specifications for Tank Cars.</li> <li>2. Regulated-material must be managed in the container in accordance with the applicable requirements specified in 49 CFR 107(B) -- Exemptions; and 49 CFR 172, 173, &amp; 180.</li> <li>3. No exceptions to the regulations of 49 CFR part 178 or part 179 are allowed; except, for a lab pack that is managed in accordance with the requirements of 49 CFR 178, the Permittee may comply with the exceptions for those packagings specified in 49 CFR 173.12(b).</li> </ol>	<p>40 CFR 63.922(f);                  40 CFR 63.923(f);                  Minn. R. 7011.7400, subp. C</p>
<p><b>INSPECTION AND MONITORING REQUIREMENTS</b></p>	<p>40 CFR 63.926</p>
<p>The Permittee shall inspect the containers and their cover and closure devices according to the following requirements:</p>	<p>40 CFR 63.922(e) &amp; 63.923(e);                  40 CFR 63.926(a);                  Minn. R. 7011.7400, subp. C</p>
<p>1. 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.</p>	<p>40 CFR 63.926(a)(1);                  Minn. R. 7011.7400, subp. C</p>
<p>2. 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.</p>	<p>40 CFR 63.926(a)(2);                  Minn. R. 7011.7400, subp. C</p>
<p>3. When a defect is detected for the container, cover, or closure devices, the Permittee must either empty the regulated-material from the defective container or repair the defective container in accordance with the following requirements:</p>	<p>40 CFR 63.926(a)(3);                  Minn. R. 7011.7400, subp. C</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

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<p>- To empty the regulated-material from the defective container, remove the regulated-material from the defective container to meet the conditions for an empty container 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>(continued)</p>
<p>- If the Permittee elects not to empty the regulated-material from the defective container, the Permittee 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>(continued)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

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**Subject Item: GP 003 Tanks Subject to Subpart OO - National Emission Standards for Tanks**

**Associated Items:** TK 007 Waste Solvent - Tank 3 (Overflow Tank)

TK 012 #2 Fuel Oil - Tank 12

TK 014 Waste Solvent - Tank 11

TK 015 Decant

TK 016 Sludge Blend Tank

TK 017 Sludge Feed Tank

TK 018 Waste Solvent - Tank 21

TK 019 Waste Solvent - Tank 22

TK 020 Waste Solvent - Tank 23

TK 021 Waste Solvent - Tank 24

TK 022 Waste Solvent - Tank 25

TK 023 Waste Solvent - Tank 26

TK 024 Waste Solvent - Tank 27

TK 025 Waste Solvent - Tank 28

What to do	Why to do it
STANDARDS -- Tank Fixed Roof	40 CFR 63.902
This section applies to the control of air emissions from a tank using a fixed roof, that is not also equipped with an internal floating roof.	40 CFR 63.902(a); Minn. R. 7011.7400, subp. B
Each tank shall be equipped with a fixed roof designed to meet the following: 1. 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 or may be an integral part of the tank structural design. 2. 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.	40 CFR 63.902(b); Minn. R. 7011.7400, subp. B
3. Each opening in the fixed roof, and any manifold system associated with the fixed roof, shall be either: - 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 - 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.	(continued)
4. 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.	(continued)
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: 1. Opening of closure devices or removal of the fixed roof is allowed only: - 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. - To remove accumulated sludge or other residues from the bottom of the tank.	40 CFR 63.902(c); Minn. R. 7011.7400, subp. B

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

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2. 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	(continued)
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. 3. 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.	(continued)
The Permittee shall inspect the air emission control equipment in accordance with the requirements specified in 40 CFR 63.906(a).	40 CFR 63.902(d); Minn. R. 7011.7400, subp. B
<b>TEST METHODS AND PROCEDURES</b>	40 CFR 63.905
The Permittee shall use the test methods and procedures listed in 40 CFR 63.905 for determining no detectable organic emissions to determine compliance with subpart DD.	40 CFR 63.905; Minn. R. 7011.7400, subp. B
<b>INSPECTION AND MONITORING REQUIREMENTS</b>	40 CFR 63.906
Each tank listed in GP 003 shall be inspected to meet the following requirements: 1. 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.	40 CFR 63.906(a); Minn. R. 7011.7400, subp. B
2. Perform an initial inspection following installation of the fixed roof. Perform subsequent inspections at least once every calendar year except as provided under 40 CFR 63.906(d). 3. Maintain a record of the inspection in accordance with the recordkeeping requirements of GP 003.	(continued)
The Permittee shall repair all detected defects as follows: 1. First efforts at repair of the defect shall be made 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 below. 2. 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.	40 CFR 63.906(a)(3)&(b); Minn. R. 7011.7400, subp. B
The Permittee shall maintain a record of the defect repair in accordance with the recordkeeping requirements of GP 003.	40 CFR 63.906(c); Minn. R. 7011.7400, subp. B
<b>Alternative Inspection and Monitoring Interval.</b> Following the initial inspection and monitoring of a fixed roof, subsequent inspection and monitoring of the equipment may be performed at intervals longer than 1 year when the Permittee determines that performing the required inspection or monitoring procedures would expose a worker to dangerous, hazardous, or otherwise unsafe conditions and complies with the following requirements: 1. 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.	40 CFR 63.906(d); Minn. R. 7011.7400, subp. B
2. The Permittee must develop and implement a written plan and schedule to inspect and monitor the fixed roof and its closure devices using the applicable procedures specified in 40 CFR 63.906 during times when a worker can safely access the 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 equipment under the provisions of 40 CFR 63.906. A copy of the written plan and schedule must be maintained at the plant site.	(continued)
<b>RECORDKEEPING REQUIREMENTS</b>	40 CFR 63.907

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

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Facility Name: 3M - Cottage Grove Corporate Incinerator

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Prepare and maintain a record for each tank that includes the following information: 1. A tank identification number (or other unique identification description). 2. A description of the tank dimensions and the tank design capacity. 3. The date that each inspection required by 40 CFR 63.906 is performed.	40 CFR 63.907(a); Minn. R. 7011.7400, subp. B
The Permittee shall record the following information for each defect detected during inspections required by 40 CFR 63.906: - The location of the defect; - A description of the defect; - The date of detection; and - The corrective action taken to repair the defect; and - If applicable, the reason for delay of repair and expected repair completion date.	40 CFR 63.907(b); Minn. R. 7011.7400, subp. B

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

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**Subject Item: GP 004 Tanks Subject to Subpart DD - NESHAP from Off-Site Waste and Recovery Operations**

**Associated Items:** CE 012 Flaring

TK 002 Hazardous Waste Solvent

What to do	Why to do it
APPLICABILITY AND DESIGNATION OF AFFECTED SOURCES	40 CFR 63.680
<p>An off-site material management unit is a tank, container, surface impoundment, oil-water separator, organic-water separator, or transfer system used to manage off-site material. Each off-site material management unit is subject to Subpart DD.</p> <p>Any material that is a waste, used oil, or used solvent that is produced or generated within the plant site is not an off-site material subject to Subpart DD.</p>	40 cfr 63.680(b)(1)(ii)&(c)(1); Minn. R. 7011.7400, subp. A
STANDARDS: -- Tanks	40 CFR 63.685
<p>TK 002 shall be vented through a closed-vent system to a control device in accordance with the following requirements:</p> <p>1. 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:</p> <ul style="list-style-type: none"> <li>- 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.</li> </ul>	40 CFR 63.685(b)(1), (d)&(g); Minn. R. 7011.7400, subp. A
<ul style="list-style-type: none"> <li>- 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.</li> </ul>	(continued)
<ul style="list-style-type: none"> <li>- 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.</li> <li>- The closed-vent system and control device shall be designed and operated in accordance with 40 CFR 63.693.</li> </ul>	(continued)
<p>2. 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:</p> <ul style="list-style-type: none"> <li>- 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: <ul style="list-style-type: none"> <li>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; or</li> <li>b. To remove accumulated sludge or other residues from the bottom of the tank.</li> </ul> </li> <li>- Opening of a safety device is allowed at any time conditions require it to do so to avoid an unsafe condition.</li> </ul>	(continued)
<p>3. The Permittee shall inspect and monitor the air emission control equipment in accordance with the Inspection and Monitoring requirements of GP 004.</p>	(continued)
STANDARDS -- Containers	40 CFR 63.688; Minn. R. 7011.7400, subp. A
<p>The Permittee shall control air emissions from containers in accordance with the standards for Container Level 2 controls, except that containers with a design capacity greater than 0.1 cubic meters and less than 0.46 cubic meters may be controlled using the standards for Container Level 1 controls, listed under GP 002.</p>	40 CFR 63.688(b); Minn. R. 7011.7400, subp. A
<p>Control air emissions for each transfer system by using one of the following:</p> <ol style="list-style-type: none"> <li>1. A transfer system that uses covers in accordance with 40 CFR 63.689(d);</li> <li>2. A transfer system that consists of continuous hard piping. All joints or seams between the pipe sections shall be permanently or semi-permanently sealed; or</li> </ol>	40 CFR 63.689; Minn. R. 7011.7400, subp. A

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

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<p>3. A transfer system that is enclosed and vented through a closed vent system to a control device such that:</p> <ul style="list-style-type: none"> <li>- The transfer system is designed and operated such that the internal pressure in the vapor headspace in the enclosure is maintained at a level less than atmospheric pressure when the control device is operating, and</li> <li>- The closed-vent system and control device are designed and operated in accordance with 40 CFR 63.693.</li> </ul>	<p>(continued)</p>
<p><b>STANDARDS:</b> -- Closed-Vent Systems and Control Devices</p>	<p>40 CFR 63.693</p>
<p>The vent stream required to be controlled shall be conveyed to the flare 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).</p>	<p>40 CFR 63.693(b)(1)&amp;(c); Minn. R. 7011.7400, subp. A</p>
<p>The Permittee shall use a flare that meets the following requirements:</p> <ol style="list-style-type: none"> <li>1. The flare must be designed and operated in accordance with the requirements in 40 CFR 63.11(b). Demonstrate this by performing the following procedures: <ul style="list-style-type: none"> <li>- Conduct a visible emission test for the flare according to 40 CFR 63.11(b)(4).</li> <li>- Determine the net heating value of the gas being combusted in the flare according to 40 CFR 63.11(b)(6); and</li> <li>- 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 (b)(8). A previous compliance demonstration for the flare may be used to demonstrate compliance with this requirement by meeting the following conditions: <ul style="list-style-type: none"> <li>- The compliance determination was conducted using the above procedures; and</li> <li>- No flare operating parameter or process changes have occurred since completion of the compliance determination which could affect the results.</li> </ul> </li> </ul> </li> </ol>	<p>40 CFR 63.693(b)(2)&amp;(5); 40 CDR 63.693(h); Minn. R. 7011.7400, subp. A</p>
<ol style="list-style-type: none"> <li>2. Monitor the operation of the flare using a heat sensing monitoring device that continuously detects the presence of a pilot flame. Record, for each 1-hour period, whether the monitor was continuously operating and whether a pilot flame was continuously present during each hour.</li> </ol>	<p>(continued)</p>
<p>The flare shall be operating whenever gases or vapors containing HAP are vented to the flair except as listed below:</p> <ul style="list-style-type: none"> <li>- The flare may be bypassed for the purpose of performing planned routine maintenance of the closed-vent system or flare in situations when the routine maintenance cannot be performed during periods that the tank vented to the flare is shutdown. On an annual basis, the total time that the closed-vent system or flare is bypassed to perform routine maintenance shall not exceed 240 hours per each calendar year.</li> <li>- The flare may be bypassed for the purpose of correcting a malfunction of the closed-vent system or flare. The Permittee shall perform the adjustments or repairs necessary to correct the malfunction as soon as practicable after the malfunction is detected.</li> </ul>	<p>40 CFR 63.693(b)(3); Minn. R. 7011.7400, subp. A</p>
<p><b>TESTING METHODS AND PROCEDURES</b></p>	<p>40 CFR 63.694</p>
<p>The Permittee shall use the test methods and procedures listed in 40 CFR 63.694(k) for determining no detectable organic emissions to determine compliance with subpart DD.</p>	<p>40 CFR 63.694(k); Minn. R. 7011.7400, subp. A</p>
<p><b>INSPECTION AND MONITORING REQUIREMENTS</b> -- Tanks</p>	<p>40 CFR 63.695(b)</p>
<p>Each tank listed in GP 004 shall be inspected to meet the following requirements:</p> <ol style="list-style-type: none"> <li>1. 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.</li> </ol>	<p>40 CFR 63.695(a)(1)&amp;(b)(3); Minn. R. 7011.7400, subp. A</p>
<ol style="list-style-type: none"> <li>2. Perform an initial inspection following installation of the fixed roof. Perform subsequent inspections at least once every calendar year except as provided under Alternative Inspection and Monitoring Interval.</li> <li>3. Maintain a record of the inspection in accordance with the recordkeeping requirements of GP 004.</li> </ol>	<p>(continued)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

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<p>Repair all detected defects as follows:</p> <ol style="list-style-type: none"> <li>1. 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. If the Permittee elects to use a 30-day extension, 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>2. 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> </ol>	<p>40 CFR 63.695(a)(1), (b)(3)(iii)&amp;(b)(4); Minn. R. 7011.7400, subp. A</p>
<p><b>INSPECTION AND MONITORING REQUIREMENTS</b> -- Closed-Vent Systems</p>	<p>40 CFR 63.695(c)</p>
<p>Inspect and monitor the closed-vent systems using the following procedures:</p> <ol style="list-style-type: none"> <li>1. At initial startup, 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.</li> </ol>	<p>40 CFR 63.693(b)(4)(i); 40 CFR 63.695(a)(2)&amp;(c); Minn. R. 7011.7400, subp. A</p>
<ol style="list-style-type: none"> <li>2. After initial startup, inspect and monitor the closed-vent system as follows: <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 or the connection is unsealed.</li> </ul> </li> </ol>	<p>(continued)</p>
<ul style="list-style-type: none"> <li>- Closed-vent system components or connections other than those specified above 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 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>(continued)</p>
<ol style="list-style-type: none"> <li>3. The Permittee shall maintain a record of the inspection and monitoring in accordance with the recordkeeping requirements of GP 004.</li> </ol>	<p>(continued)</p>
<p>Repair all detected defects or leaks as follows:</p> <ol style="list-style-type: none"> <li>1. First efforts at repair of the defect shall be made 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.</li> </ol>	<p>40 CFR 63.695(c)(1)(iii)&amp;(c)(3); Minn. R. 7011.7400, subp. A</p>
<ol style="list-style-type: none"> <li>2. Repair of a defect may be delayed beyond 45 calendar days if either of the following conditions occur: <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>                     Repair the defect the next time the unit that vents to the closed-vent system is shutdown, the repair must be completed before the unit resumes operation.                 </li> <li>3. Maintain a record of the defect repair in accordance with the recordkeeping requirements of GP 004.</li> </ol>	<p>(continued)</p>
<p><b>RECORDKEEPING REQUIREMENTS</b></p>	<p>40 CFR 63.696</p>
<p>The Permittee shall comply with the recordkeeping requirements in 40 CFR 63.10 that are applicable to Subpart DD as specified in Appendix B of this permit.</p>	<p>40 CFR 63.696(a); Minn. R. 7011.7400, subp. A</p>
<p>Prepare and maintain a record for each tank that includes the following information:</p> <ol style="list-style-type: none"> <li>1. A tank identification number (or other unique identification description).</li> <li>2. The date of inspection.</li> </ol>	<p>40 CFR 63.696(e)(1); Minn. R. 7011.7400, subp. A</p>
<p>For each defect detected during inspections, record the following information:</p> <ul style="list-style-type: none"> <li>- The location and a description of the defect;</li> <li>- The date of detection; and</li> <li>- Corrective action taken to repair the defect; and</li> <li>- If applicable, the reason for delay of repair and expected repair completion date.</li> </ul>	<p>40 CFR 63.696(e)(2); Minn. R. 7011.7400, subp. A</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator  
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<p>Record, on a semiannual basis, the following information for those planned routine maintenance operations that would require the flare not to meet the Closed-Vent Systems and Control Devices Standards of GP 004:</p> <ol style="list-style-type: none"> <li>1. A description of the planned routine maintenance that is anticipated to be performed for the flare during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods; and</li> <li>2. A description of the planned routine maintenance that was performed for the flare 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 flare did not meet the the Closed-Vent Systems and Control Devices Standards of GP 004.</li> </ol>	<p>40 CFR 63.696(g); Minn. R. 7011.7400, subp. A</p>
<p>Record the following information for those unexpected flare malfunctions that would require the flare not to meet the Closed-Vent Systems and Control Devices Standards of GP 004:</p> <ol style="list-style-type: none"> <li>1. The occurrence and duration of each malfunction of the flare;</li> <li>2. 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 flare while the flare is not properly functioning.</li> <li>3. Actions taken during periods of malfunction to restore a malfunctioning flare to its normal or usual manner of operation.</li> </ol>	<p>40 CFR 63.696(h); Minn. R. 7011.7400, subp. A</p>
<p><b>REPORTING REQUIREMENTS</b></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 Appendix B.</p>	<p>40 CFR 63.697(a)(2); Minn. R. 7011.7400, subp. A</p>
<p>For the flare, submit the following notifications and reports to the Administrator:</p> <ol style="list-style-type: none"> <li>1. A Notification of Performance Tests specified in 40 CFR 63.7 and 63.9(g);</li> <li>2. Performance test reports specified in 40 CFR 63.10(d)(2); and</li> </ol>	<p>40 CFR 63.697(b); Minn. R. 7011.7400, subp. A</p>
<p>3. SSM reports specified in 40 CFR 63.10(d)(5).</p> <ul style="list-style-type: none"> <li>- If actions taken during SSM are not completely consistent with the procedures specified in the source's SSM plan specified in 40 CFR 63.6(e)(3), the information shall be stated 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> <li>- Separate SSM reports are not required if the information is included in the summary report specified in 40 CFR 63.697(b)(4).</li> </ul>	<p>(continued)</p>
<p>4. A summary report specified in 40 CFR 63.10(e)(3) shall be submitted on a semi-annual basis. The 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.</p>	<p>(continued)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

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

- Associated Items:** CE 004 Subcooling Vessel  
 CE 005 M1 Module  
 CE 010 Venturi Quench  
 CE 011 Electrostatic Precipitator - High Efficiency  
 MR 002 Stack CO  
 MR 004 Stack O2  
 SV 010 Incinerator Stack  
 SV 025 Incinerator Emergency Stack

What to do	Why to do it
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
The acronyms used in these requirements refer to the following: CAS, Chemical Abstract Services registry CEMS, Continuous Emissions Monitoring System CMS, Continuous Monitoring System DRE, Destruction and Removal Efficiency MTEC, Maximum Theoretical Emissions Concentration DOC, Documentation of Compliance NOC, Notification of Compliance	40 CFR 63.1201(b); Minn. R. 7011.7410
EMISSION LIMITS	hdr
Significant figures for emission limits. The Permittee must perform intermediate calculations using at least three significant figures, and may round the resultant emission levels to two significant figures to document compliance.	40 CFR 63.1219(d); Minn. R. 7011.7410
Dioxins and Furans: less than or equal to 0.40 ng TEQ/dscm corrected to 7% oxygen.	40 CFR 63.1219(a)(1)(ii); Minn. R. 7011.7410
Mercury: less than or equal to 33.0 micrograms/DSCM corrected to 7% oxygen. The more stringent state limit assures compliance with the NESHAP limit of 130 micrograms/dscm.	Minn. R. 7007.0800, subp. 2; 40 CFR 63.1219(a)(2); Minn. R. 7011.7410
Mercury: less than or equal to 15.0 lbs/year using 12-month Rolling Sum	Minn. R. 7007.0800, subp. 2
Semi-Volatile Metals - Pb, Cd: less than or equal to 230.0 micrograms/dscm, combined emissions, corrected to 7% oxygen.	40 CFR 63.1219(a)(3); Minn. R. 7011.7410
Low-Volatile Metals - As, Be, Cr: less than or equal to 92.0 micrograms/dscm, combined emissions, corrected to 7% oxygen.	40 CFR 63.1219(a)(4); Minn. R. 7011.7410
Carbon Monoxide: less than or equal to 100 parts per million by volume (ppmv), using 1-hour rolling average (monitored continuously with a CEMS), dry basis and corrected to 7% oxygen. Document that, during the DRE test runs or their equivalent as provided by 40 CFR 63.1206(b)(7), hydrocarbons do not exceed 10 ppmv during those runs, using 1-hour rolling average (monitored continuously with a CEMS), dry basis, corrected to 7% oxygen, and reported as propane.	40 CFR 63.1219(a)(5)(i); Minn. R. 7011.7410
Hydrochloric Acid and Chlorine Gas: less than or equal to 32 ppmv, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7% oxygen.	40 CFR 63.1219(a)(6); Minn. R. 7011.7410
Total Particulate Matter: less than or equal to 29.8 milligrams/DSCM (0.013 gr/dscf) corrected to 7% oxygen.	40 CFR 63.1219(a)(7); Minn. R. 7011.0515, subp. 1; Minn. R. 7011.7410
Total Particulate Matter: less than or equal to 0.045 grains/dry standard cubic foot	Minn. R. 7011.0610, subp. 1
Opacity: less than or equal to 20.0 percent opacity	Minn. R. 7011.0110
Sulfur Dioxide: less than or equal to 95.0 tons/year using 12-month Rolling Sum	Title I Condition: To avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 190 parts per million	Title I Condition: To avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000
Carbon Monoxide: less than or equal to 94.6 tons/year using 12-month Rolling Sum	Title I Condition: To avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 20 parts per million dry, as THC, corrected to 7% oxygen.	Title I Condition: To avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

Principle Organic Hazardous Constituent (POHC): The Permittee must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in the hazardous waste feedstream. This specification shall be based 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.	40 CFR 63.1219(c)(3); Minn. R. 7011.7410
99.99% DRE. The Permittee must achieve a DRE of 99.99% for each POHC designated above. Calculate DRE for each POHC from the following equation:  DRE = [1 - (Wout / Win)] x 100%  Where: Win = mass feedrate of one POHC in a waste feedstream; and Wout = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.	40 CFR 63.1219(c)(1); Minn. R. 7011.7410
Beryllium: less than or equal to 10.0 grams per 24-hour period	40 CFR 61.32(a); Minn. R. 7011.9940, subp. A
The Permittee must use a carbon monoxide CEMS to demonstrate and monitor compliance with the carbon monoxide and hydrocarbon standard under subpart EEE. The Permittee must also use an oxygen CEMS to continuously correct the CO level to 7% Oxygen.	40 CFR 63.1209(a)(1)(i); Minn. R. 7011.7410
The Permittee must install, calibrate, maintain, and operate a particulate matter CEMS to demonstrate and monitor compliance with the PM standards under subpart EEE.	40 CFR 63.1209(a)(1)(iii); Minn. R. 7011.7410
FEEDRATE LIMITS	hdr
Process Throughput: less than or equal to 21,800 lbs/hour using 1-Hour Rolling Average of total hazardous waste to the kiln, unless a new maximum process throughput is required to be set pursuant to Minn. R. 7017.2025, subp. 3.	40 CFR 63.1209(j)(3)&(k)(4); Minn. R. 7011.7410
Process Throughput: less than or equal to 14,800 lbs/hour using 1-Hour Rolling Average of total pumpable waste to the kiln, unless a new maximum process throughput is required to be set pursuant to Minn. R. 7017.2025, subp. 3. "Pumpable" includes solvent plus sludge.	40 CFR 63.1209(j)(3)&(k)(4); Minn. R. 7011.7410
Process Throughput: less than or equal to 300 lbs/hour using 1-Hour Rolling Average of total waste feed rate to the secondary combustion chamber (SCC), unless a new maximum process throughput is required to be set pursuant to Minn. R. 7017.2025, subp. 3.	40 CFR 63.1209(j)(3)&(k)(4); Minn. R. 7011.7410
Process Throughput: less than or equal to 3,410 lbs/hour using 12-Hour Rolling Average of ash fed to the system, unless a new maximum process throughput is required to be set pursuant to Minn. R. 7017.2025, subp. 3.	40 CFR 63.1209(m)(3); Minn. R. 7011.7410
Chlorine: less than or equal to 735 lbs/hour using 12-Hour Rolling Average fed to the system, unless a new maximum chlorine throughput is required to be set pursuant to Minn. R. 7017.2025, subp. 3.	40 CFR 63.1209(n)(4)&(o)(1)(i); Minn. R. 7011.7410
Mercury: less than or equal to 0.0040 lbs/hour using 12-Hour Rolling Average fed to the system.	40 CFR 63.1207(m)(1); 40 CFR 63.1209(l)(1)(i); Minn. R. 7011.7410
Semi-Volatile Metals (SVM) - Pb, Cd: less than or equal to 2.47 lbs/hour combined, using 12-hour rolling average fed to the system, unless a new maximum SVM throughput is required to be set pursuant to Minn. R. 7017.2025, subp. 3, using the minimum of the following: 1. The approved feedrate extrapolation level; 2. The MTEC calculated to demonstrate compliance with 40 CFR 63.1219(a)(3).	40 CFR 63.1209(n)(2)(i), (ii) & (vii); Minn. R. 7011.7410
Low-Volatile Metals (LVM) - As, Be, Cr: less than or equal to 12.0 lbs/hr combined, using 12-hour rolling average fed to the system, unless a new maximum LVM throughput is required to be set pursuant to Minn. R. 7017.2025, subp. 3, using the minimum of the following: 1. The approved feedrate extrapolation level; 2. The MTEC calculated to demonstrate compliance with 40 CFR 63.1219(a)(4).	40 CFR 63.1209(n)(2)(i), (ii) & (vii); Minn. R. 7011.7410
Pumpable LVM: less than or equal to 10.0 lbs/hr combined, using 12-hour rolling average fed to the system, unless a new maximum pumpable LVM throughput is required to be set pursuant to Minn. R. 7017.2025, subp. 3, using the minimum of the following: 1. The approved feedrate extrapolation level; 2. The MTEC calculated to demonstrate compliance with 40 CFR 63.1219(a)(4).	40 CFR 63.1209(n)(2)(i), (ii), (vi) & (vii); Minn. R. 7011.7410
The burning of dioxin/furan-listed wastes F020, F021, F022, F023, F026, or F027 (see 40 CFR 261.31) is prohibited.	40 CFR 63.1219(c)(2); Minn. R. 7011.7410
OPERATING LIMITS	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

Temperature: greater than or equal to 1760 degrees F using 1-Hour Rolling Average for a minimum kiln exit gas temperature, unless a new minimum temperature is required to be set pursuant to Minn. R. 7017.2025, subp. 3. The temperature measurement location shall be as documented in the test plans submitted under 40 CFR 63.1207(e).	40 CFR 63.1209(j)(1)&(k)(2); Minn. R. 7011.7410
Temperature: greater than or equal to 1710 degrees F using 1-Hour Rolling Average for a minimum SCC exit gas temperature, unless a new minimum SCC exit gas temperature is required to be set pursuant to Minn. R. 7017.2025, subp. 3. The temperature measurement location shall be as documented in the test plans submitted under 40 CFR 63.1207(e).	40 CFR 63.1209(j)(1)&(k)(2); Minn. R. 7011.7410
Air Flow Rate: less than or equal to 39,700 dry standard cubic feet/minute using 1-Hour Rolling Average for a maximum flue gas flow rate, unless a new maximum flow rate is required to be set pursuant to Minn. R. 7017.2025, subp. 3.	40 CFR 63.1209(j)(2), (k)(3), (n)(5) & (o)(3)(v); Minn. R. 7011.7410
Air Flow Rate: greater than or equal to 33,100 dry standard cubic feet/minute using 12-Hour Rolling Average (937 dscm/min) as a minimum flue gas flow rate.	40 CFR 63.1207(m)(1)(iii); Minn. R. 7011.7410
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); Minn. R. 7011.7410
COMPLIANCE ASSURANCE MONITORING (CAM)	hdr
CAM requirements for EU 008 can be found listed under the heading "Other Continuous Monitoring Systems (CMS)" and subject item CE 010.	40 CFR Part 64
COMPLIANCE STANDARDS	hdr
Mercury Calculation and Recordkeeping: By the 15th day of each month, the Permittee shall calculate and record the monthly mercury emissions for the previous 12 calendar months. The Permittee shall maintain a written record of the monthly mercury emission calculations.	Minn. R. 7007.0800, subps. 2, 4, 5, 14 & 16(J)
Hazardous waste is defined to not be in the combustion chamber when the hazardous waste feed to the combustor has been cut off for a period of time not less than the hazardous waste residence time.	40 CFR 63.1201(a); Minn. R. 7011.7410
The emission standards and operating requirements set forth in subpart EEE apply at all times except during periods of startup, shutdown, and malfunction (SSM), and when hazardous waste is not in the combustion chamber.	40 CFR 63.1206(b)(1); Minn. R. 7011.7410
The Permittee has elected to comply with the CO and hydrocarbon emissions standards by documenting continuous compliance with the CO standard using a CEMS and documenting compliance with the hydrocarbon standard during the DRE performance tests which show compliance with the DRE standards.  Use the highest hourly rolling average hydrocarbon level achieved during the DRE test runs to document compliance with the hydrocarbon standard.	40 CFR 63.1206(b)(6); Minn. R. 7011.7410
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 63.1219.  Document compliance with the DRE standard for each run of the comprehensive performance test individually. Document compliance with all other emission standards based on the arithmetic average of the emission results of each run.	40 CFR 63.1206(b)(12); Minn. R. 7011.7410
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.  Use any DRE test data that documents that the source achieves the required level of DRE provided: - 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 - The DRE test data meet quality assurance objectives determined on a site-specific basis.	40 CFR 63.1206(b)(7); Minn. R. 7011.7410
Calculate the hazardous waste residence time and include the calculation in the Performance Test Plan and the Operating Record.  Provide the hazardous waste residence time in each Notification of Compliance.	40 CFR 63.1206(b)(11); Minn. R. 7011.7410

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator  
 Permit Number: 16300025 - 002

<p>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:</p> <p>1. 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:</p> <ul style="list-style-type: none"> <li>- A description of the changes and affected emission standards; and</li> <li>- A comprehensive performance test schedule and test plan that will document compliance with the affected emission standard(s);</li> </ul>	<p>40 CFR 63.1206(b)(5)(i); Minn. R. 7011.7410</p>
<p>2. Conduct a comprehensive performance test to document compliance with the affected emission standards and establish operating parameter limits as required under 40 CFR 63.1209, and submit a NOC; and</p> <p>3. After the change and prior to submitting the NOC, the Permittee must not burn hazardous waste for more than 720 hours and only for the purposes of pretesting or comprehensive performance testing; or</p> <p>The Permittee may petition the Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a NOC 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>(continued)</p>
<p>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, DOC, NOC, and SSM plan to reflect these changes.</p>	<p>40 CFR 63.1206(b)(5)(ii); Minn. R. 7011.7410</p>
<p><b>OPERATING REQUIREMENTS</b></p>	<p>hdr</p>
<p>Operate only under the operating requirements specified in the DOC under 40 CFR 63.1211(c) or the NOC under 40 CFR 63.1207(j), except during performance tests under approved test plans according to 40 CFR 63.1207(e)-(g) or periods of SSM.</p> <p>The DOC and the NOC 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>40 CFR 63.1206(c)(1); Minn. R. 7011.7410</p>
<p>Startup, Shutdown, and Malfunction Plan: The Permittee is subject to the SSM plan requirements of 40 CFR 63.6(e)(3).</p>	<p>40 CFR 63.1206(c)(2)(i); Minn. R. 7011.7410</p>
<p>If electing to comply with 40 CFR 270.235(a)(1)(iii), (a)(2)(iii), or (b)(1)(ii) to address RCRA concerns to minimize emissions of toxic compounds from SSM events, then:</p> <p>1. The SSM plan must include a description of potential causes of malfunctions, including releases from emergency safety vents, that may result in significant releases of HAPs, and actions the source is taking to minimize the frequency and severity of those malfunctions; and</p>	<p>40 CFR 63.1206(c)(2)(ii); Minn. R. 7011.7410</p>
<p>2. Submit the SSM plan to the Administrator for review and approval. 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, nor the Administrator's failure to approve or disapprove of the plan, relieves the Permittee of the responsibility to comply with the provisions of this subpart.</p>	<p>(continued)</p>
<p>3. The Permittee must request approval in writing from the Administrator within 5 days after making a change to the SSM plan that may significantly increase emissions of hazardous air pollutants.</p> <p>To request approval of such changes to the SSM plan, the Permittee must follow the procedures above for initial approval of the plan.</p>	<p>(continued)</p>
<p>Identify in the SSM 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); Minn. R. 7011.7410</p>
<p>Record the SSM Plan in the operating record.</p>	<p>40 CFR 63.1206(c)(2)(iv); Minn. R. 7011.7410</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

<p>Automatic waste feed cutoff (AWFCO): 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> <ol style="list-style-type: none"> <li>1. 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;</li> <li>2. When the span value of any CMS detector, except a CEMS, is met or exceeded;</li> <li>3. Upon malfunction of a CMS monitoring an operating parameter limit specified under 40 CFR 63.1209 or an emission level; or</li> <li>4. When any component of the automatic waste feed cutoff system fails.</li> </ol>	<p>40 CFR 63.1206(c)(3) (40 CFR 63.1206(c)(3)(i)); Minn. R. 7011.7410</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.</p>	<p>(continued) (40 CFR 63.1206(c)(3)(ii)); Minn. R. 7011.7410</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>(continued) (40 CFR 63.1206(c)(3)(iii)); Minn. R. 7011.7410</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, the Permittee has failed to comply with the AWFCO requirements. If an equipment or other failure prevents immediate and automatic cutoff of the hazardous waste feed, cease feeding hazardous waste as soon as possible.</p>	<p>(continued) (40 CFR 63.1206(c)(3)(iv)); Minn. R. 7011.7410</p>
<p>Corrective Measures: If, after any AWFCO, there is an exceedance of an emission standard or operating requirement, 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>(continued) (40 CFR 63.1206(c)(3)(v)); Minn. R. 7011.7410</p>
<p>Excessive Exceedance Reporting:</p> <ol style="list-style-type: none"> <li>1. For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber 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.</li> <li>2. 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.</li> </ol>	<p>(continued) (40 CFR 63.1206(c)(3)(vi)); Minn. R. 7011.7410</p>
<p>Testing: Test the AWFCO system and associated alarms at least weekly to verify operability, or at least monthly if the Permittee documents in the operating record that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. The Permittee must document and record AWFCO operability test procedures and results in the operating record.</p>	<p>(continued) (40 CFR 63.1206(c)(3)(vii)); Minn. R. 7011.7410</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 specified below. If the Permittee ramps down the waste feed, document ramp down procedures in the O&amp;M 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>(continued) (40 CFR 63.1206(c)(3)(viii)); Minn. R. 7011.7410</p>
<p>Compliance with AWFCO requirements during malfunctions. The AWFCO requirements of 40 CFR 63.1206(c)(3) continue to apply, except for 40 CFR 63.1206(c)(3)(v)-(vi).</p> <ol style="list-style-type: none"> <li>1. During malfunctions, if a Subpart EEE emission standard monitored by a CEMS or COMs or operating limit specified under 40 CFR 63.1209 is exceeded, the AWFCO 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.</li> <li>2. 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 SSM Plan.</li> </ol>	<p>40 CFR 63.1206(c)(2)(v)(A); Minn. R. 7011.7410</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

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<p>3. For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber 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 SSM 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 SSM Plan, in the excess emissions report under 40 CFR 63.10(e)(3).</li> </ul>	<p>(continued)</p>
<p>Compliance with AFCWO requirements when burning hazardous waste during startup and shutdown.</p> <p>If hazardous waste is fed during startup or shutdown, waste feed restrictions and other appropriate operating conditions and limits must be included in the SSM plan. The operating limits must be interlocked with the AQCWO system, except for paragraphs (c)(3)(v)&amp;(vi) above.</p> <p>The AWFCO system must immediately and automatically cutoff the hazardous waste feed if the operating limits are exceeded, except as provided by (c)(3)(viii).</p> <p>An exceedance of an emission standard or operating limit is not a violation if complying with the operating procedures prescribed in the SSM plan.</p>	<p>40 CFR 63.1206(c)(2)(v)(B); Minn. R. 7011.7410</p>
<p>Emergency Safety Vent (ESV) openings</p> <p>1. Failure to Meet Standards: If an ESV opens when hazardous waste remains in the combustion chamber during an event other than a malfunction as defined in the SSM Plan such that combustion gases are not treated as during the most recent comprehensive 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) (40 CFR 63.1206(c)(4)(i)); Minn. R. 7011.7410</p>
<p>2. ESV Operating Plan: Develop an ESV Operating Plan, comply with the operating plan, and keep the plan in the operating record. 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>(continued) (40 CFR 63.1206(c)(4)(ii)); Minn. R. 7011.7410</p>
<p>3. Corrective Measures: After any ESV opening that results in a failure to meet the emission standards, 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>(continued) (40 CFR 63.1206(c)(4)(iii)); Minn. R. 7011.7410</p>
<p>4. 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 standards (as defined above) documenting the result of the investigation and corrective measures taken.</p>	<p>(continued) (40 CFR 63.1206(c)(4)(iv)); Minn. R. 7011.7410</p>
<p>Combustion system leaks of HAPs 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 other technique(s) which can be demonstrated to prevent fugitive emissions without use of instantaneous pressure limits.</li> </ul>	<p>40 CFR 63.1206(c)(5)(i); Minn. R. 7011.7410</p>
<p>Specify in the performance test workplan and NOC 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, then also specify in the performance test workplan and NOC 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)(ii); Minn. R. 7011.7410</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator  
 Permit Number: 16300025 - 002

<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, CMS 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. 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).</p>	<p>40 CFR 63.1206(c)(6)                  (40 CFR 63.1206(c)(6)(ii));                  Minn. R. 7011.7410</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 HAPs. A certified control room operator must be on duty at the site at all times the source is in operation.</p>	<p>(continued)                  (40 CFR 63.1206(c)(6)(ii));                  Minn. R. 7011.7410</p>
<p>Control room operators must 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)); or 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)-(vi); or be trained and certified under a State program. Control room operator requirements under the ASME program are as follows:</p>	<p>(continued)                  (40 CFR 63.1206(c)(6)(iii), (v) &amp; (vi));                  Minn. R. 7011.7410</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. Control room operators must achieve full certification within one year of the compliance date;</li> <li>- New operators must, before assuming their duties, achieve provisional certification, and must submit an application to ASME, and be scheduled for the full certification exam. These operators must achieve full certification within one year of assuming their duties.</li> </ul>	<p>(continued)                  (40 CFR 63.1206(c)(6)(iii));                  Minn. R. 7011.7410</p>
<p>Record the operator training and certification program in the operating record.</p>	<p>40 CFR 63.1206(c)(6)(vii); Minn. R. 7011.7410</p>
<p>Prepare and at all times operate according to an O&amp;M 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 HAPs. The plan must prescribe how the combustor will be operated and maintained in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the CPT. Record the plan in the operating record.</p> <p>This plan ensures compliance with the O&amp;M requirements of 40 CFR 63.6(e) and minimizes emissions of pollutants, automatic waste feed cutoffs, and malfunctions.</p>	<p>40 CFR 63.1206(c)(7);                  Minn. R. 7011.7410</p>
<p>PERFORMANCE TESTING</p>	<p>hdr</p>
<p>Performance Test: due 365 days after Permit Issuance to measure Fluoride and Hydrogen Fluoride emissions, to verify emission factors.</p>	<p>Minn. R. 7017.2020, subp. 1</p>
<p>Performance Test: due 365 days after Permit Issuance to measure opacity.</p>	<p>Minn. R. 7017.2020, subp. 1</p>
<p>Performance Test: due before end of each calendar 60 months starting 11/01/2006 to measure NOx and SO2 emissions, to verify emission factors.</p>	<p>Minn. R. 7017.2020, subp. 1</p>
<p>The provisions of 40 CFR 63.7 apply, except as provided by 40 CFR 63.1207.</p>	<p>40 CFR 63.1207(a); Minn. R. 7011.7410</p>
<p>Conduct Comprehensive Performance Tests (CPTs) to demonstrate compliance with the emission standards, 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>The Permittee must commence testing no later than 61 months after the date of commencing the previous CPT. The initial CPT to demonstrate compliance with the replacement standards was conducted October 14-16, 2009.</p>	<p>40 CFR 63.1207(b)(1);                  40 CFR 63.1207(c)(3);                  40 CFR 63.1207(d)(1)&amp;(4);                  Minn. R. 7011.7410</p>
<p>The Permittee must submit to the Administrator a notification of the intention to conduct a CPT 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> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Submit to the Administrator a notification of the intention to conduct the CPT at least 60 calendar days before the test is scheduled to begin.</li> </ul>	<p>40 CFR 63.1207(e)(1)(i);                  Minn. R. 7011.7410</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator  
 Permit Number: 16300025 - 002

<p>Conduct confirmatory performance tests to:</p> <ol style="list-style-type: none"> <li>1. Demonstrate compliance with the dioxin/furan emission standard when the source operates under normal operating conditions; and</li> <li>2. Conduct a performance evaluation of CMSs required for compliance assurance with the dioxin/furan emission standard under 40 CFR 63.1209(k).</li> </ol> <p>The Permittee must commence confirmatory performance testing no later than 31 months after the date of commencing the previous CPT used to show compliance with 40 CFR 63.1219. To ensure that the confirmatory test is conducted approximately midway between CPTs, the Administrator will not approve a test plan that schedules testing within 18 months of commencing the previous CPT.</p>	<p>40 CFR 63.1207(b)(2)&amp;(d)(2); Minn. R. 7011.7410</p>
<p>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); Minn. R. 7011.7410</p>
<p>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); Minn. R. 7011.7410</p>
<p>The site-specific test plan and CMS performance evaluation test plan shall be made available to the public for review no later than 60 calendar days before initiation of the test. The test plans must be accessible to the public for 60 calendar days, beginning on the date of the public notice. The location must be unrestricted and provide access to the public during reasonable hours and provide a means for the public to obtain copies. The notification must include the following information:</p> <ul style="list-style-type: none"> <li>- The name and telephone number of the contact person;</li> <li>- The name and telephone number of the agency's contact person;</li> <li>- The location where the test plans and any necessary supporting documentation can be reviewed and copied;</li> <li>- The time period for which the test plans will be available for public review; and</li> <li>- An expected time period for commencement and completion of the performance test and CMS performance evaluation test.</li> </ul>	<p>40 CFR 63.1207(e)(2); Minn. R. 7011.7410</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; comprehensive or confirmatory test. The "waiver" would be an extension of time to conduct the performance test at a later date.</p>	<p>40 CFR 63.1207(e)(3); Minn. R. 7011.7410</p>
<p>Qualifications for the waiver:</p> <ul style="list-style-type: none"> <li>- 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);</li> <li>- The Permittee must submit a site-specific emissions testing plan and a CMS performance evaluation test plan at least one year before a CPT is scheduled to begin, or at least 60 days before a confirmatory performance test is scheduled to begin. 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</li> <li>- The Permittee must make a good faith effort to accommodate the Administrator's comments on the test plans.</li> </ul>	<p>(continued)          (40 CFR 63.1207(e)(3)(i)); Minn. R. 7011.7410</p>
<p>Procedures for obtaining a waiver and duration of the waiver:</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- 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.</li> <li>- 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.</li> </ul>	<p>(continued)          (40 CFR 63.1207(e)(3)(ii)); Minn. R. 7011.7410</p>
<p>Content of the waiver:</p> <ul style="list-style-type: none"> <li>- Provide documentation to enable the Administrator to determine that the source is meeting the relevant standards on a continuous basis as required by 40 CFR 63.7(h)(2).</li> <li>- 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).</li> </ul>	<p>(continued)          (40 CFR 63.1207(e)(3)(iii)); Minn. R. 7011.7410</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

<p>Public Notice: Notify the public (e.g., a notice to the public mailing list) of the petition to waive a performance test at the same time the petition is submitted to the Administrator. The notification must include all of the following information:</p> <ul style="list-style-type: none"> <li>- The name and telephone number of the contact person;</li> <li>- The name and telephone number of the agency's contact person;</li> <li>- The date the site-specific performance test plan and CMS performance evaluation test plans were submitted; and</li> <li>- The length of time requested for the waiver.</li> </ul>	<p>(continued)                  (40 CFR 63.1207(e)(3)(iv));                  Minn. R. 7011.7410</p>
<p>Content of Performance Test Plans: The provisions of 40 CFR 63.7(c)(2)(i)-(iii)&amp;(v) regarding the content of the test plan apply. In addition, include the information provided in 40 CFR 63.1207(f)(1) in the CPT plan, and the information provided in 40 CFR 63.1207(f)(2) in the confirmatory test plan.</p>	<p>40 CFR 63.1207(f);                  Minn. R. 7011.7410</p>
<p>Operating Conditions During Testing</p>	<p>hdr</p>
<p>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.</p>	<p>40 CFR 63.1207(g);                  Minn. R. 7011.7410</p>
<p>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):</p> <ul style="list-style-type: none"> <li>- Chlorine feedrate. The Permittee must feed normal (or higher) levels of chlorine during the dioxin/furan performance test;</li> <li>- Ash feedrate. The Permittee must conduct the semivolatile metal and low volatile metal performance tests when feeding normal (or higher) levels of ash; and</li> <li>- Cleaning cycle of the particulate matter control device. The Permittee must conduct the PM, semivolatile metal, and low volatile metal performance tests when the particulate matter control device undergoes its normal (or more frequent) cleaning cycle.</li> </ul>	<p>40 CFR 63.1207(g)(1)(i);                  Minn. R. 7011.7410</p>
<p>Modes of operation. 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.</p>	<p>40 CFR 63.1207(g)(1)(ii);                  Minn. R. 7011.7410</p>
<p>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. Include documentation in the performance test plan justifying the duration of system conditioning.</p>	<p>40 CFR 63.1207(g)(1)(iii);                  Minn. R. 7011.7410</p>
<p>Confirmatory performance testing - Operations during testing:                  The Permittee must conduct confirmatory performance testing for dioxin/furan under normal operating conditions for the following parameters:</p> <ul style="list-style-type: none"> <li>- Carbon monoxide (or hydrocarbon) CEMS emissions levels must be within the range of the average value to the maximum value allowed;</li> <li>- Each operating limit (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;</li> </ul>	<p>40 CFR 63.1207(g)(2);                  Minn. R. 7011.7410</p>
<ul style="list-style-type: none"> <li>- The average value is defined as the sum of the 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;</li> <li>- The Permittee must feed chlorine at normal feedrates or greater; and</li> </ul>	<p>(continued)</p>
<ul style="list-style-type: none"> <li>- The Administrator may approve an alternative range to that required by 40 CFR 63.1207(g)(2) 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.</li> </ul>	<p>40 CFR 63.1207(g)(2)(v);                  Minn. R. 7011.7410</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

<p>Operating Conditions During Subsequent Testing: 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); Minn. R. 7011.7410</p>
<p>Time Extension for Subsequent Performance Tests: 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 emissions 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>The request shall include the contents specified in 40 CFR 63.1207(i)(1)-(6).</p>	<p>40 CFR 63.1207(i); Minn. R. 7011.7410</p>
<p>Notification of Compliance</p>	<p>hdr</p>
<p>Comprehensive Performance Test: Within 90 days of completion of a CPT, postmark a NOC documenting compliance with the emission standards and CMS requirements, and identifying operating parameter limits under 40 CFR 63.1209, except as provided by 40 CFR 63.1207(j)(4) (time extension).</p> <p>Upon postmark of the NOC, the Permittee must comply with all operating requirements specified in the NOC in lieu of the limits specified in the DOC required under 40 CFR 63.1211(c).</p>	<p>40 CFR 63.1207(j)(1); Minn. R. 7011.7410</p>
<p>Confirmatory Performance Test: Within 90 days of completion of a confirmatory performance test, postmark a NOC documenting compliance or noncompliance with the applicable dioxin/furan emission standard, except as provided by 40 CFR 63.1207(j)(4) (time extension).</p>	<p>40 CFR 63.1207(j)(2); Minn. R. 7011.7410</p>
<p>See 40 CFR 63.7(g) and 63.9(h) for additional requirements pertaining to the NOC (e.g., the Permittee must include results of performance tests in the NOC).</p>	<p>40 CFR 63.1207(j)(3); Minn. R. 7011.7410</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 NOC after completion of testing. The Administrator will determine whether a time extension is warranted.</p>	<p>40 CFR 63.1207(j)(4); Minn. R. 7011.7410</p>
<p>Failure to Submit a Timely Notification of Compliance: If the Permittee fails to postmark a NOC by the specified date, the Permittee must cease hazardous waste burning immediately.</p> <p>The Permittee must submit to the Administrator a NOC subsequent to a new CPT before resuming hazardous waste burning. Prior to submitting the revised NOC, 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>40 CFR 63.1207(k); Minn. R. 7011.7410</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 CPT 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); Minn. R. 7011.7410</p>
<p>If the Permittee has failed to demonstrate compliance with the emission standards for any mode of operation, the Permittee must conduct a CPT under revised operating conditions following the requirements for performance testing of this section, and the Permittee must submit to the Administrator a NOC subsequent to the new CPT.</p> <p>Prior to submitting the revised NOC, 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).</p>	<p>40 CFR 63.1207(l)(1)(ii); Minn. R. 7011.7410</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

<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:</p> <ol style="list-style-type: none"> <li>1. Submit to the Administrator a test plan to conduct a CPT to identify revised limits on the applicable dioxin/furan operating parameters specified in 40 CFR 63.1209(k);</li> <li>2. Submit to the Administrator a NOC with the dioxin/furan emission standard under 40 CFR 63.1207(j), (k) &amp; (l). Include in the Notification the revised limits on the applicable dioxin/furan operating parameters specified in 40 CFR 63.1209(k); and</li> <li>3. Until the NOC 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) below.</li> </ol>	<p>40 CFR 63.1207(l)(2); Minn. R. 7011.7410</p>
<p>The Permittee may petition the Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a NOC 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 subp. 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 NOC.</p>	<p>40 CFR 63.1207(l)(3); Minn. R. 7011.7410</p>
<p>Waiver of Performance Test</p>	<p>hdr</p>
<p>The Permittee is not required to conduct performance tests to document compliance with the mercury, semivolatile metals, low volatile metals or hydrogen chloride/chlorine gas emission standards under the conditions specified below. The waiver provisions apply in addition to the provisions of 40 CFR 63.7(h).</p>	<p>40 CFR 63.1207(m); Minn. R. 7011.7410</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 waiver 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)(5); Minn. R. 7011.7410</p>
<p>The Permittee is deemed to be in compliance with an emission standard if the twelve-hour rolling average MTEC does not exceed the emission standard, determined as specified below:</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)(1)(i); Minn. R. 7011.7410</p>
<p>To document compliance with the waiver provisions of 40 CFR 63.1207(m):</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>- Identify in the NOC 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 calculated MTEC is below the applicable emission standard; and</li> <li>- Interlock the minimum gas flowrate limit and maximum feedrate limit to the 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 specified above.</li> </ul>	<p>40 CFR 63.1207(m)(1)(ii)-(iii); Minn. R. 7011.7410</p>
<p>When determining the feedrate of mercury, semivolatile metals, low volatile metals, or total chlorine and chloride for purposes of this provision, 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)(3); Minn. R. 7011.7410</p>
<p>TEST METHODS</p>	<p>hdr</p>
<p>The Permittee shall use the test methods listed in 40 CFR 63.1208(b) to determine compliance with the emissions of subpart EEE.</p>	<p>40 CFR 63.1208(b); Minn. R. 7011.7410</p>
<p>MONITORING REQUIREMENTS</p>	<p>hdr</p>
<p>The provisions of 40 CFR 63.8(g) apply for reduction of monitoring data.</p>	<p>40 CFR 63.1209(h); Minn. R. 7011.7410</p>
<p>Continuous Emissions Monitoring Systems</p>	<p>hdr</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

Performance Specifications (PS). 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 PS-1, PS-4B, and PS-8A in 40 CFR Part 60, appendix B.	40 CFR 63.1209(a)(2); Minn. R. 7011.7410
CO readings exceeding the span. 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 PS-4B, 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.	40 CFR 63.1209(a)(3); Minn. R. 7011.7410
Calculation of rolling averages upon intermittent operations: 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); Minn. R. 7011.7410
Calculation of rolling averages when the hazardous waste feed is cutoff: Continue monitoring carbon monoxide when the hazardous waste feed is cutoff if the source is operating. Hazardous waste feed must not be resumed if the emission levels exceed the standard.	40 CFR 63.1209(a)(6)(iii); Minn. R. 7011.7410
Operating Parameter Limits (OPLs) for hydrocarbons: Demonstrate that hydrocarbon emissions during the CPT do not exceed the hydrocarbon emissions standard. In addition, the OPLs established for DRE 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 OPLs under 40 CFR 63.1209(j) based on each test and the more restrictive of the OPLs applies.	40 CFR 63.1209(a)(7); Minn. R. 7011.7410
Other Continuous Monitoring Systems (CMS)	hdr
Use CMS (e.g., thermocouples, pressure transducers, flow meters) to document compliance with the applicable operating parameter limits under subpart EEE.	40 CFR 63.1209(b)(1); 40 CFR 64.7; Minn. R. 7011.7410
Install and operate CMS other than CEMS in conformance with 40 CFR 63.8(c)(3) that requires, at a minimum, compliance with the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system, except: - 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. Operate and maintain optical pyrometers in accordance with manufacturer specifications, and 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.	40 CFR 63.1209(b)(2); 40 CFR 64.7; Minn. R. 7011.7410
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.	40 CFR 63.1209(b)(3); 40 CFR 64.7; Minn. R. 7011.7410
The span of the non-CEMS CMS detector must not be exceeded. Interlock the span limits into the AWFCO system required by 40 CFR 63.1206(c)(3).	40 CFR 63.1209(b)(4); 40 CFR 64.7; Minn. R. 7011.7410
Calculation of rolling averages upon intermittent operations: 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.	40 CFR 63.1209(b)(5)(ii); 40 CFR 64.7; Minn. R. 7011.7410
Calculation of rolling averages when the hazardous waste feed is cutoff: Continue monitoring operating parameter limits with a CMS when the hazardous waste feed is cutoff if the source is operating. Hazardous waste feed must not be resumed if an operating parameter exceeds its limit.	40 CFR 63.1209(b)(5)(iii); 40 CFR 64.7; Minn. R. 7011.7410
Analysis of Feedstreams	hdr
Prior to feeding the material, obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits in 40 CFR 63.1209.	40 CFR 63.1209(c)(1); Minn. R. 7011.7410

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

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<p>Develop and implement a feedstream analysis plan and record it in the operating record. The plan must specify at a minimum:</p> <ul style="list-style-type: none"> <li>- The parameters for which each feedstream will be analyzed to ensure compliance with operating parameter limits;</li> <li>- If the analysis will be obtained by performing sampling and analysis or by other methods;</li> <li>- How the analysis will be used to document compliance with applicable feedrate limits;</li> <li>- The test methods to be used to obtain the analyses;</li> <li>- The sampling method used to obtain a representative sample of each feedstream to be analyzed using sampling methods described in 40 CFR 266, appendix IX, or an equivalent method; and</li> <li>- The frequency with which the initial analysis of the feedstream will be reviewed or repeated to ensure that the analysis is accurate and up to date.</li> </ul>	<p>40 CFR 63.1209(c)(2); Minn. R. 7011.7410</p>
<p>Review and approval of analysis plan. Submit the feedstream analysis plan to the Administrator for review and approval, if requested.</p>	<p>40 CFR 63.1209(c)(3); Minn. R. 7011.7410</p>
<p>Compliance with feedrate limits. To comply with the applicable feedrate limits of 40 CFR 63.1209, monitor and record feedrates as follows:</p> <ul style="list-style-type: none"> <li>- Determine and record the value of the parameter for each feedstream by sampling and analysis or other method;</li> <li>- Determine and record the mass or volume flowrate of each feedstream by a CMS. If the flowrate of a feedstream is determined by volume, then determine and record the density of the feedstream by sampling and analysis (unless the constituent concentration is reported in units of weight per unit volume; and</li> <li>- Calculate and record the mass feedrate of the parameter per unit time.</li> </ul>	<p>40 CFR 63.1209(c)(4); Minn. R. 7011.7410</p>
<p>Waiver of monitoring of constituents in certain feedstreams. Monitoring levels of metals or chlorine is not required in the following feedstreams to document compliance with the feedrate limits under this section provided that the CPT plan documents the expected levels of the constituent in the feedstream and accounts for those assumed feedrate levels in documenting compliance with feedrate limits:</p> <ul style="list-style-type: none"> <li>- natural gas,</li> <li>- process air, and</li> <li>- feedstreams from vapor recovery systems.</li> </ul>	<p>40 CFR 63.1209(c)(5); Minn. R. 7011.7410</p>
<p>Performance Evaluations: The requirements of 40 CFR 63.8(d) (Quality control program) and (e) (Performance evaluation of CMSs) apply, except that performance evaluations of components of the CMS must be conducted under the frequency and procedures applicable to performance tests as provided by 40 CFR 63.1207.</p> <p>Comply with the quality assurance procedures for CEMS prescribed in the appendix to subpart EEE.</p>	<p>40 CFR 63.1209(d); Minn. R. 7011.7410</p>
<p>Conduct of Monitoring. The provisions of 40 CFR 63.8(b) apply.</p>	<p>40 CFR 63.1209(e); Minn. R. 7011.7410</p>
<p>Operation and Maintenance of CMS: Provisions of 40 CFR 63.8(c) apply except:</p> <ul style="list-style-type: none"> <li>- 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);</li> <li>- 40 CFR 63.8(c)(4)(ii). The PSs for CO, hydrocarbon, and O2 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).</li> </ul>	<p>40 CFR 63.1209(f); 40 CFR 64.7; Minn. R. 7011.7410</p>
<p>Alternative Monitoring Requirements other than CEMS</p>	<p>hdr</p>
<p>An application may be submitted 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, by following the requirements listed in 40 CFR 63.1209(g)(1).</p>	<p>40 CFR 63.1209(g)(1); Minn. R. 7011.7410</p>
<p>The Administrator may determine on a case-by-case basis at any time that the Permittee needs to limit additional or alternative operating parameters 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); Minn. R. 7011.7410</p>
<p>Reduction of Monitoring Data. The provisions of 40 CFR 63.8(g) apply.</p>	<p>40 CFR 63.1209(h); Minn. R. 7011.7410</p>
<p>When an Operating Parameter is Applicable to Multiple Standards. 40 CFR 63.1209(j)-(p) requires limits on operating parameters to be established based on comprehensive performance testing to ensure compliance is maintained with the emission standards of subpart EEE. For several parameters, a limit must be established for the parameter to ensure compliance with more than one emission standard. 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); Minn. R. 7011.7410</p>
<p>NOTIFICATION, REPORTING, AND RECORDKEEPING REQUIREMENTS</p>	<p>hdr</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-35 06/28/12

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

The dumpstack shall not be used except in emergencies.	Minn. R. 7007.0800, subp. 2
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
<p>The NOC status requirements of 40 CFR 63.9(h) and 63.1207(j) apply, except that:</p> <ul style="list-style-type: none"><li>- The notification is a Notification of Compliance, rather than compliance status;</li><li>- The notification is required for the initial CPT and each subsequent CPT and confirmatory performance test; and</li><li>- The notification must be postmarked 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).</li></ul> <p>Upon postmark of the NOC, the operating parameter limits identified in the NOC, as applicable, shall be complied with, the limits identified in the DOC or a previous NOC are no longer applicable.</p>	40 CFR 63.1210(d); Minn. R. 7011.7410
<p>Include the DOC prepared under 40 CFR 63.1211(c) in the operating record. The DOC must identify the applicable emission standards under subpart EEE and the OPLs that will ensure compliance with those standards.</p> <p>The limits identified in the DOC are no longer applicable, they have been superceded by the NOC.</p>	40 CFR 63.1211(c); Minn. R. 7011.7410

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

**Subject Item:** EU 011 Waste Processing via Komar Shredder**Associated Items:** SV 026 Komar Relief Panels Dump Stack

<b>What to do</b>	<b>Why to do it</b>
The dumpstack shall not be used except in emergencies.	Minn. R. 7007.0800, subp. 2
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**

A-37 06/28/12

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

**Subject Item:** EU 014 Emergency Generator**Associated Items:** SV 028 Emergency Generator Stack

<b>What to do</b>	<b>Why to do it</b>
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input	Minn. R. 7011.2300, subp. 2
EU 014 is not required to meet the requirements of 40 CFR, Subpart ZZZZ and Subpart A. The initial notification was submitted on November 3, 2005.	40 CFR 63.6590(b)(1)(i) Minn. R. 7011.8150

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

**Subject Item:** CE 004 Subcooling Vessel

**Associated Items:** EU 008 Replacement Rotating Kiln

MR 001 Subcooler H2O pH

What to do	Why to do it
Liquid Flow Rate: greater than or equal to 3250 gallons/minute using 1-Hour Rolling Average for recirculation water flow, unless a new minimum flow rate is required to be set pursuant to Minn. R. 7017.2025, subp. 3.	40 CFR 63.1209(m)(1)(i)(C), (n)(5), (o)(3)(v)
Water pressure: greater than or equal to 19.40 psi (gauge) using 1-Hour Rolling Average minimum scrubber liquid feed pressure, unless a new minimum feed pressure is required to be set pursuant to Minn. R. 7017.2025, subp. 3.	40 CFR 63.1209(l)(2), (o)(3)(i)
Water flow rate: greater than or equal to 194.0 gallons/minute using 1-Hour Rolling Average minimum combined blow down rate for the Subcooling Vessel and the Venturi Quench (CE 010), unless a new minimum combined blow down rate is required to be set pursuant to Minn. R. 7017.2025, subp. 3. See also CE 010.	40 CFR 63.1209(m)(1)(i)(B), (n)(3), (g)(1); 40 CFR 64.3 per approved alternative monitoring application
pH: greater than or equal to 1.5 pH using 1-Hour Rolling Average of the Scrubber Liquid, unless a new minimum pH is required to be set pursuant to Minn. R. 7017.2025, subp. 3.	40 CFR 63.1209(o)(3)(iv)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

**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 16.1 inches of water column using 1-Hour Rolling Average , unless a new maximum pressure drop is required to be set pursuant to Minn. R. 7017.2025, subp. 3.	40 CFR 63.1209(m)(1)(i)(A), (o)(3)(i)
Water flow rate: greater than or equal to 128.0 gallons/minute using 1-Hour Rolling Average minimum make-up rate, unless a new minimum water make-up rate is required to be set pursuant to Minn. R. 7017.2025, subp. 3. (As approved alternative to comply with minimum blow down rate limit).	40 CFR 63.1209(m)(1)(i)(B), (n)(3), (g)(1) per approved alternative monitoring application
Liquid to Gas (L/G) Ratio: greater than or equal to 39.0 gallons per 1000 standard cubic feet using a 1-Hour Rolling Average, , unless a new minimum L/G ratio is required to be set pursuant to Minn. R. 7017.2025, subp. 3.	40 CFR 63.1209(m)(1)(i)(C), (n)(3), (o)(3)(v)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-40 06/28/12

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

**Subject Item:** CE 009 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 013 Lime Silo

<b>What to do</b>	<b>Why to do it</b>
Visible Emissions: The Permittee shall check the fabric filter for any visible emissions once each time the unit is operating.	Minn. R. 7007.0800, subps. 4 & 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, subps. 4 & 5
The Permittee shall operate and maintain the fabric filter in accordance with the 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, subps. 4, 5 & 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-41 06/28/12

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

**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.	40 CFR 64.3; Minn. R. 7007.0800, subp. 14
Water flow rate: greater than or equal to 194.0 gallons/minute using 1-Hour Rolling Average minimum combined blow down rate for the Subcooling Vessel (CE 004) and the Venturi Quench, unless a new minimum combined blow down rate is required to be set pursuant to Minn. R. 7017.2025, subp. 3. See also CE 004.	40 CFR 63.1209(m)(1)(i)(B), (n)(3), (g)(1); 40 CFR 64.3 per approved alternative monitoring application

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

**Subject Item:** CE 011 Electrostatic Precipitator - High Efficiency

**Associated Items:** EU 008 Replacement Rotating Kiln

What to do	Why to do it
Total Power Input: greater than or equal to 9.52 kilowatts using 1-Hour Rolling Average , unless a new minimum Total Power Input is required to be set pursuant to Minn. R. 7017.2025, subp. 3. If the 1-hour rolling average total power input drops below the minimum limit, this shall be reported as a deviation.	40 CFR 63.1209(m)(1)(iv)(A-C)
Operate the control equipment any time the incinerator is operating except while burning only natural gas.	Minn. R. 7007.0800, subp. 2
The WESP shall be operated with at least the minimum specific collection area (SCA) in service determined during the most recent particulate matter performance test showing compliance.	Minn. R. 7007.0800, subp. 14
<p>The WESP cleaning cycle total (min/hour) using 8-hour block average shall not exceed the average duration (min/hour) demonstrated the most recent Comprehensive Performance Test.</p> <p>For the purposes of trouble-shooting only, the facility may increase the total cleaning cycle duration by up to 10% while remaining in compliance with the minimum kW requirement for up to:</p> <ul style="list-style-type: none"> <li>- 10 hrs/yr while burning hazardous waste; and</li> <li>- 24 hrs/yr while burning #2 Fuel Oil only</li> </ul>	Minn. R. 7007.0800, subp. 14
<b>MONITORING AND RECORDKEEPING</b>	hdr
Monitor and record the minimum SCA in service each day of operation. Calculate and record the 8-hour block average WESP spray/cleaning time.	Minn. R. 7007.0800, subps. 4 & 5
Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file of the total power input. The total power input shall be calculated and recorded at least once every 15 minutes. The three-hour rolling total power input shall be calculated and recorded based on the 15-minute readings.	Title I Condition: To avoid classification as a major source and modification under 40 CFR 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 and 5
Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications.	Minn. R. 7007.0800, subps. 4 and 5
Monitoring Equipment: The Permittee must install and maintain a CPMS for monitoring the ESP total power input as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required.	Minn. R. 7007.0800, subps. 4 and 5
Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components. This includes, but is not limited to: components that are not subject to wear or plugging including structural components, housings, and hoods; and components that are subject to wear or plugging, including bearings, belts, hoses, fans, nozzles, orifices, and ducts. Maintain a written record of the inspection and any corrective actions taken resulting from the inspection.	Minn. R. 7007.0800, subps. 4, 5 and 14
Annual Calibration: Calibrate the total power input monitor at least at least once each 12 months and shall maintain a written record of the calibration and any action resulting from the calibration. Replacement is acceptable in lieu of calibration.	Minn. R. 7007.0800, subps. 4, 5 and 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>- Any recorded operating parameter is outside the required operating range; or</li> <li>- The ESP or any of its components are found during an inspection to need repair.</li> </ul> <p>Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O&amp;M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP.</p>	Minn. R. 7007.0800, subps. 4, 5 and 14
Operation and Maintenance of ESP: The Permittee shall operate and maintain the ESP in accordance with the O&M Plan. The Permittee shall keep copies of the O&M Plan available onsite for use by staff and review by MPCA staff.	Minn. R. 7007.0800, subp. 14

**TABLE B: SUBMITTALS**

B-1 06/28/12

Facility Name: 3M - Cottage Grove Corporate Incinerator  
Permit Number: 16300025 - 002

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

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

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

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:

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

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.

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

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

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

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

B-2 06/28/12

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

<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
Testing Frequency Plan	due 60 days after Performance Test for opacity. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on 12-month, 36-month, or 60-month intervals, or as applicable, shall be required upon written approval of the MPCA.	EU008

**TABLE B: RECURRENT SUBMITTALS**

B-3 06/28/12

Facility Name: 3M - Cottage Grove Corporate Incinerator

Permit Number: 16300025 - 002

<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 starting 02/14/2005. 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 starting 02/14/2005 (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

**APPENDIX A**

**Table 1 to Subpart EEE of Part 63 – General Provisions Applicable to Subpart EEE**

Facility Name: 3M – Cottage Grove Corporate Incinerator  
 Permit Number: 16300025-002

Reference	Applies	Explanation
63.1-5	Yes	
63.6(a)-(e)	Yes	
63.6(f)	Yes	Except that the performance test requirements of Sec. 63.1207 apply instead of §63.6(f)(2)(iii)(B).
63.6(g)-(h)	Yes	
63.6(i)	Yes	Section 63.1213 specifies that the compliance date may also be extended for inability to install necessary emission control equipment by the compliance date because of implementation of pollution prevention or waste minimization controls.
63.6(j)	Yes	
63.7(a)	Yes	Except §63.1207(e)(3) allows you to petition the Administrator under §63.7(h) to provide an extension of time to conduct a performance test.
63.7(b)	Yes	Except §63.1207(e) requires you to submit the site-specific test plan for approval at least one year before the comprehensive performance test is scheduled to begin.
63.7(c)	Yes	Except §63.1207(e) requires you to submit the site-specific test plan (including the quality assurance provisions under §63.7(c)) for approval at least one year before the comprehensive performance test is scheduled to begin.
63.7(d)	Yes	
63.7(e)	Yes	Except §63.1207 prescribes operations during performance testing and §63.1209 specifies operating limits that will be established during performance testing (such that testing is likely to be representative of the extreme range of normal performance).
63.7(f)	Yes	
63.7(g)	Yes	Except §63.1207(j) requiring that you submit the results of the performance test (and the notification of compliance) within 90 days of completing the test, unless the Administrator grants a time extension, applies instead of §63.7(g)(1).
63.7(h)	Yes	Except §63.1207(c)(2) allows data in lieu of the initial comprehensive performance test, and §63.1207(m) provides a waiver of certain performance tests. You must submit requests for these waivers with the site-specific test plan.
63.8(a)-(b)	Yes	
63.8(c)	Yes	Except: (1) §63.1211(c) that requires you to install, calibrate, and operate CMS by the compliance date applies instead of §63.8(c)(3); and (2) the performance specifications for CO, HC, and O2 CEMS in subpart B, of this chapter requiring that the detectors measure the sample concentration at least once every 15 seconds for calculating an average emission level once every 60 seconds apply instead of §63.8(c)(4)(ii).
63.8(d)	Yes	
63.8(e)	Yes	Except §63.1207(e) requiring you to submit the site-specific comprehensive performance test plan and the CMS performance evaluation test plan for approval at least one year prior to the planned test date applies instead of §§63.8(e)(2) and (3)(iii).
63.8(f)-(g)	Yes	
63.9(a)	Yes	
63.9(b)	Yes	<i>Note:</i> Section 63.9(b)(1)(ii) pertains to notification requirements for area sources that become a major source, and §63.9(b)(2)(v) requires a major source determination. Although area sources are subject to all provisions of this subpart (Subpart EEE), these sections nonetheless apply because the major source determination may affect the applicability of part 63 standards or title V permit requirements to other sources (i.e., other than a hazardous waste combustor) of HAPs at the facility.
63.9(c)-(d)	Yes	
63.9(e)	Yes	Except §63.1207(e) which requires you to submit the comprehensive performance test plan for approval one year prior to the planned performance test date applies instead of §63.9(e).
63.9(f)	Yes	Section 63.9(f) applies if you are allowed under §63.1209(a)(1)(v) to use visible determination of opacity for compliance in lieu of a COMS.
63.9(g)	Yes	Except §63.9(g)(2) pertaining to COMS does not apply.
63.9(h)	Yes	Except §63.1207(j) requiring you to submit the notification of compliance within 90 days of completing a performance test unless the Administrator grants a time extension applies instead of §63.9(h)(2)(iii). <i>Note:</i> Even though area sources are subject to this subpart, the major source determination required by §63.9(h)(2)(i)(E) is applicable to hazardous waste combustors for the reasons discussed above.
63.9(i)-(j)	Yes	
63.10	Yes	Except reports of performance test results required under §63.10(d)(2) may be submitted up to 90 days after completion of the test.
63.11	No	
63.12-15	Yes	

**APPENDIX B**

**Table 2 to Subpart DD of Part 63 – General Provisions Applicable to Subpart DD**

Facility Name: 3M – Cottage Grove Corporate Incinerator  
 Permit Number: 16300025-002

Reference	Applies	Explanation	Reference	Applies	Explanation
63.1(a)(1)-(3)	Yes		63.7(a)(1)	No	Subp. DD specifies required testing and compliance demonstration procedures.
63.1(a)(4)	No	Subp. DD (this table) specifies applicability of each paragraph in subp. A to subp. DD.	63.7(a)(2)-(3)	Yes	
63.1(a)(5)-(9)	No		63.7(b)-(c)	No	
63.1(a)(10)-(14)	Yes		63.7(d)	Yes	
63.1(b)(1)	No	Subp. DD specifies its own applicability.	63.7(e)(1)-(2)	Yes	
63.1(b)(2)	Yes		63.7(e)(3)	No	Subp. DD specifies test methods and procedures.
63.1(b)(3)	No		63.7(e)(4)	Yes	
63.1(c)(1)	No	Subp. DD explicitly specifies requirements that apply.	63.7(f)	No	Subp. DD specifies applicable methods and provides alternatives.
63.1(c)(2)	No	Area sources are not subject to subp. DD.	63.7(g)	Yes	
63.1(c)(3)	No		63.7(h)(1)-(3)	Yes	
63.1(c)(4)	Yes		63.7(h)(4)	No	
63.1(c)(5)	Yes	Except that sources are not required to submit notifications overridden by this table.	63.7(h)(5)	Yes	
63.1(d)-(e)	No		63.8(a)	No	
63.2	Yes	§63.681 of subp. DD specifies that if the same term is defined in subps. A and DD, it shall have the meaning given in subp. DD.	63.8(b)(1)	Yes	
63.3	Yes		63.8(b)(2)	No	Subp. DD specifies locations to conduct monitoring.
63.4(a)(1)-(3)	Yes		63.8(b)(3)	Yes	
63.4(a)(4)	No	Reserved.	63.8(c)(1)-(3)	Yes	
63.4(a)(5)	Yes		63.8(c)(4)-(8)	No	Subp. DD specifies monitoring frequency
63.4(b)-(c)	Yes		63.8(d)-(e)	No	
63.5(a)	Yes	Except replace term “source” and “stationary source” in §63.5(a)(1) of subp. A with “affected source.”	63.8(f)(1)-(3)	Yes	
63.5(b)(1)	Yes		63.8(f)(4)(i)-(ii)	Yes	
63.5(b)(2)	No	Reserved.	63.8(f)(4)(iii)	No	
63.5(b)(3)-(6)	Yes	Except the cross-reference to §63.9(b) is changed to §63.9(b)(4)&(5). Subp. DD overrides §63.9(b)(2)&(b)(3).	63.8(f)(5)(i)	Yes	
63.5(c)	No	Reserved.	63.8(f)(5)(ii)	No	
63.5(d)(1)	Yes		63.8(f)(5)(iii)	Yes	
63.5(d)(2)	No		63.8(f)(6)	Yes	
63.5(d)(3)-(4)	Yes		63.8(g)	Yes	
63.5(e)-(f)	Yes		63.9(a)	Yes	
63.6(a)	Yes		63.9(b)(1)(i)	Yes	
63.6(b)(1)	No	Subp. DD specifies compliance dates for sources subject to subp. DD.	63.9(b)(1)(ii)	No	
63.6(b)(2)	No		63.9(b)(2)	Yes	
63.6(b)(3)	Yes		63.9(b)(3)	No	
63.6(b)(4)	No	May apply when standards are proposed under section 112(f) of the CAA.	63.9(b)(4)-(5)	Yes	
63.6(b)(5)	No	§63.697 of subp. DD includes notification requirements.	63.9(c)-(d)	Yes	
63.6(b)(6)-(7)	No		63.9(e)-(g)	No	
63.6(c)(1)	No	§63.680 of subpart DD specifies the compliance date.	63.9(h)-(i)	Yes	
63.6(c)(2)-(4)	No		63.9(j)	No	
63.6(c)(5)	Yes		63.10(a)	Yes	
63.6(d)	No		63.10(b)(1)	Yes	
63.6(e)	Yes		63.10(b)(2)(i)-(ii)	Yes	
63.6(f)(1)	Yes		63.10(b)(2)(iii)	No	
63.6(f)(2)(i)	Yes		63.10(b)(2)(iv)-(xi)	Yes	
63.6(f)(2)(ii)	Yes	Subp. DD specifies the use of monitoring data in determining compliance with subp. DD.	63.10(b)(2)(xii)-(xiv)	No	
63.6(f)(2)(iii)(A)-(C)	Yes		63.10(b)(3)	Yes	
63.6(f)(2)(iii)(D)	No		63.10(c)	No	
63.6(f)(2)(iv)-(v)	Yes		63.10(d)(1)	No	
63.6(f)(3)	Yes		63.10(d)(2)	Yes	
63.6(g)	Yes		63.10(d)(3)	No	
63.6(h)	No	Subp. DD does not require opacity and VE standards.	63.10(d)(4)-(5)	Yes	
63.6(i)	Yes	Except for §63.6(i)(15), which is reserved.	63.10(e)	No	
63.6(j)	Yes		63.10(f)	Yes	
			63.11-63.15	Yes	

**APPENDIX C**

**Insignificant Activities and General Applicable Requirements**

Facility Name: 3M – Cottage Grove Corporate Incinerator

Permit Number: 16300025-002

This table lists the insignificant activities that are currently at the facility and their general applicable requirements.

Minn. R. 7007.1300, subp.	Rule Description of the Activity	General Applicable Requirement
3(B)(2)	Fuel burning equipment with a capacity less than 500,000 Btu/hr, but only if the total of this equipment is less than 2,000,000 Btu/hr.  Propane Radiant Heater – Bldg 181. Capacity of 100,000 Btu/hr	Minn. R. 7011.0515
3(J)	Fugitive Emissions for roads and parking lots.	Minn. R. 7011.0150
3(I)(2)	Individual emission units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than 2,000 pounds per year each of NO <sub>x</sub> , SO <sub>2</sub> , PM, PM <sub>10</sub> , VOCs (including hazardous air pollutant-containing VOCs), and ozone.  TK 002 – Hazardous Waste Solvent TK 007 – Waste Solvent – Tank 3 (Overflow Tank) TK 012 – #2 Fuel Oil – Tank 12 TK 014 – Waste Solvent – Tank 10 TK 015 – Decant TK 016 – Sludge Blend Tank TK 017 – Sludge Feed Tank TK 018 – Waste Solvent – Tank 21 TK 019 – Waste Solvent – Tank 22 TK 020 – Waste Solvent – Tank 23 TK 021 – Waste Solvent – Tank 24 TK 022 – Waste Solvent – Tank 25 TK 023 – Waste Solvent – Tank 26 TK 024 – Waste Solvent – Tank 27 TK 025 – Waste Solvent – Tank 28 Tanker Cleaning	Minn. R. 7011.0715 (PM and opacity)
4(B)	Potential emissions of ≤ 2.28 lb/hr or actual emissions of ≤ 1.0 tpy for PM, PM <sub>10</sub> , NO <sub>x</sub> , SO <sub>2</sub> , and VOCs.  Cooling Towers Ash Handling Sludge Batch and Feed Tank Cleanout	

Under Minn. R. 7007.1250, subp. 1(A), the Permittee may add insignificant activities to the stationary source throughout the term of the permit without getting permit amendments. Certain exclusions apply and are listed in Minn. R. 7007.1250, subp. 2.

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 1630025-002**

This technical support document (TSD) is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 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 preliminary determination to issue the permit.

**1. General Information**

**1.1 Applicant and Stationary Source Location**

<b>Corporate/Company Owner</b>	<b>Stationary Source/Address (SIC Code: 3999)</b>
3M Company 3M Center, Bldg. 224-5W-03 St. Paul, MN 55144 Contact: Sumitra Ness	3M Corporate Incinerator Chemolite Blvd Bldg. 111 Cottage Grove, Washington County Phone: 651-768-1261

**1.2 Facility Description**

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 throughout North America, high BTU liquid solvent waste from outside sources, and regulated hazardous waste from Minnesota law-enforcement agencies. 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 (SCC) is 60 feet high and has a shell diameter of 20 feet. It provides additional residence time to combust off-gases of organic wastes. The SCC burners have been removed, and the burner inlets are welded shut, which has reduced the overall capacity of the incinerator. An emergency vent stack is provided at the roof of the SCC. 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 the Activities Allowed by this Permit Action

This permit amendment is a reissuance of the operating permit, and a major amendment to allow additional sources of non-3M hazardous waste for incineration in the kiln. The additional outside sources will provide high Btu value liquid solvent waste. The facility will also be authorized to process regulated hazardous waste from Minnesota law-enforcement agencies. The specific wastes that may be received are specified in the Hazardous Waste Facility permit. (MND 006 172 969)

Replacement standards for hazardous waste incinerators under 40 CFR § 63.1219 became effective on October 14, 2008. The permit was updated to reflect the new standards. The facility has also accepted lower limits on allowable mercury throughput and emissions. This accounts for a 33% reduction in hourly throughput and hourly emissions, and a 70% reduction in allowable yearly emissions.

### 1.4. Facility Emissions

**Table 1. Total Facility Limited Potential to Emit (PTE) Summary (tpy)**

	PM/PM <sub>10</sub> / PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC	Lead	Single HAP	All HAPs	Mercury (lb/yr)
Total Facility Limited PTE	20.1	95	209	67.0	40.2	0.125	27.9 (HCl)	35.4	15.0
Total Facility Actual Emissions (2008)	9.93	0.34	62.0	3.2	25.9	0.01	HAPs not reported in emission inventory		1.47

**Table 2. Facility Classification**

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		X	
Part 70 Permit Program	NO <sub>x</sub> , HCl, Total HAPs	SO <sub>2</sub> , CO	PM, PM <sub>10</sub> , PM <sub>2.5</sub> , Lead, VOC
Part 63 NESHAP	X		

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

### New Source Review (NSR)

The facility has limits to keep it a synthetic minor source under NSR regulations. No changes are authorized by this permit that would affect this status.

### Part 70 Permit Program

The facility is a major source under the Part 70 permit program.

### New Source Performance Standards (NSPS)

There are no New Source Performance Standards applicable to the operations at this facility.

### National Emission Standards for Hazardous Air Pollutants (NESHAP)

Portions of the facility are subject to the following NESHAPs (40 CFR pt. 63):

- Subp. DD – NESHAPs from Off-Site Waste and Recovery Operations
- Subp. OO – National Emission Standards for Tanks – Level 1
- Subp. PP – National Emission Standards for Containers
- Subp. EEE – NESHAPs from Hazardous Waste Combustors
- Subp. ZZZZ – NESHAPs for Stationary Reciprocating Internal Combustion Engines

Portions of the facility are subject to the following NESHAPs (40 CFR pt. 61):

- Subp. V – National Emission Standards for Equipment Leaks

### Compliance Assurance Monitoring (CAM)

The kiln (EU 008) has potential uncontrolled emissions of SO<sub>2</sub> that are greater than 100 tpy and are controlled by a Venturi Scrubber (CE 010); therefore the kiln is subject to CAM for SO<sub>2</sub>. The Venturi Scrubber is also used to control HCl emissions. The kiln is also subject to 40 CFR 63, Subpart EEE, which specifies the monitoring requirements for the Venturi Scrubber. The CAM plan is attached to the TSD as Attachment 1.

### Environmental Review & AERA

The proposed modification is not subject to environmental review, i.e. an Environmental Assessment Worksheet (EAW), and is not required to perform an Air Emissions Risk Analysis (AERA).

### Minnesota State 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 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
- 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

**Table 3. Regulatory Overview of the Facility**

<b>Level</b>	<b>Applicable Regulations</b>	<b>Comments</b>
FC	40 CFR §63, Subpart DD	NESHAPs from Off-Site Waste and Recovery Operations
GP 001	40 CFR §61.242	Equipment leaks subject to Subpart V
GP 002	40 CFR §63.920	Containers subject to Subpart PP
GP 003	40 CFR §63.900	Tanks subject to Subpart OO
GP 004	40 CFR §63.685	Tanks subject to Subpart DD
EU 008	40 CFR §63, Subpart EEE	NESHAPs from Hazardous Waste Combustors
	Minn. R. 7011.0515	Indirect Heating Equipment Rule limit ensures facility is non-major for NSR
	Minn. R. 7011.0110, subp. 2	General opacity rule
EU 014	40 CFR §63, Subpart ZZZZ	Engine subject to Subpart ZZZZ

**3. Technical Information**

**3.1 Calculations of Potential to Emit**

Detailed calculations were completed in support of permit limits and calculation of PTE. The detailed spreadsheets are stored in the Delta database. The results of the 2009 Comprehensive Performance Test (CPT) dictated new feedrate and operating limits. The replacement standards of 40 CFR §63, Subpart EEE also reduced allowable emissions. The calculations of allowable emissions were updated to reflect these changes.

Many limits are listed in the permit in units of ppm. Conversion from ppm to lb/hr requires air flow rate and pollutant specific data of molecular weight and molar volume. Molar volume is calculated using the ideal gas law, and choosing a temperature and pressure. Stack pressure was chosen at 1 bar, stack temperature was found to range from approximately 130 °F to 170 °F. The minimum stack temperature and maximum air flow rate was used to represent worst case emissions estimates. Any stack temperature above 65 °F shows a PTE for NO<sub>x</sub> below 235 tpy; so it is unlikely that actual NO<sub>x</sub> emissions will ever approach PSD thresholds.

**Low-Volatile Metals (LVM) and Semi-Volatile Metals (SVM) emission limits**

The permit contains revised feedrate limits for LVM and SVM, as well as revised emission concentration limits. The feedrate limits were calculated based on the worst-case removal efficiency demonstrated during the 2009 CPT, which represents a different methodology than in the past, where an average removal efficiency was allowed. In addition, the CPT plan specified a maximum scale-up value of 3 to be used, so that emissions and removal efficiencies measured during the performance test could be relied upon within the scale-up range. The Maximum Theoretical Emission Concentration (MTEC) calculation methodology is used to set a feedrate limit to ensure continuous compliance with the emission concentration limits.

The minimum removal efficiency of LVM measured in the 2009 CPT was higher than the average value from the previous test, however the amount of LVM fed during the test was low enough such that the maximum scale-up restriction drove the calculation of the feedrate limit for LVM, which results in a MTEC that is less than 50% of the limit.

The removal efficiency of SVM measured in the 2009 CPT was higher than measured in the previous CPT for 5 of 6 runs, however the minimum value was used which was lower than the average from the previous CPT. As a result, the feedrate limit was restricted by the MTEC calculation which decreased from the previous permit.

The MTEC calculation provides assurance that emission standards will be met as long as the feedrate limits are met, therefore CEMS are not required on the stack to assure compliance.

Detailed calculations are included in the calculation spreadsheet.

## Volatile Organic Compounds (VOCs)

PTE calculations for VOCs were completed using a weighted average molecular weight based on the measured amounts of each component from the 2001 Trial Burn. It is unlikely that actual VOC emissions will ever approach PSD thresholds.

Appendix 4 of the permit 16300025-001 contains emission calculation forms submitted by the facility. Form EC-01 lists the Maximum Controlled Emissions of the incinerator stack (SV 010) as 0.13 tpy. This form does not list a value for Limited Controlled Emissions. Whereas a Limited PTE calculation would base the calculation on a permit limit (20 ppm), the maximum PTE calculation on this form was based on an emission factor using data from a CEMS (0.32 ppm). Further in this appendix there are other calculations of maximum controlled emissions from other units; SV 009 – 7.79 tpy, SV 002 – 1.05 tpy, and FS 001 – 9.24 tpy from valves, 1.75 tpy from pump seals, and 8.63 tpy from Connectors/Flanges. SV 009 and SV 002 have since been removed from the facility and are not included in the current draft permit. It is not clear from the numbers in the Appendix from the 2005 permit how the value listed in the 2005 TSD was determined.

The calculation of limited PTE for this permit was based on the incinerator stack alone. The other stacks with VOC emissions have been removed, and fugitive emissions are not required to be included under the Part 70 permit program. An equation to calculate limited PTE from a permit limit given in ppm was used. This equation was a function of the permit limit, maximum flow rate of the gas, molecular weight of VOC, and the gas temperature at the stack exit. The calculation of limited PTE for the draft permit used a realistic worst case for stack temperature, and conservative values for the emission rate (permit limit vs. CEMS data) and molecular weight of VOC (weighted average molecular weight of VOCs in the gas vs. molecular weight of methane). An approximate estimation of the parameters used in the calculation from PER 001 and the parameters used for this permit are as follows:

	Per 001	Per 002
Minimum Stack Temp (°F)	50	130
Maximum Flow Rate (dscfm)	40,000	39,700
Molecular Weight of VOC (g/mol)	16	84.06
Emission Rate (ppm)	0.32 (CEM data)	20 (Permit Limit)
Calculated Emissions (tpy)	0.14	40.2

## Dioxins/Furans

The dioxin limit in Per 001 contained the exact language of the interim MACT emission standards as found in 40 CFR 63.1203(a)(1)(i)-(ii), where paragraph (ii) applies to sources which operate wet particulate control devices. The dioxin limit in this permit contains the language of the replacement MACT emission standards found in 40 CFR § 63.1219(a)(ii).

The MACT interim and replacement emission standards clearly state that the higher dioxin limit applies to sources which cool the gas to below 400 °C prior to the particulate control device, and the replacement emission standards further clarify that the higher dioxin limit also applies to sources not equipped with either a waste heat boiler or dry air pollution control system.

Dioxin/furan compounds are not fed to the kiln, so the emissions are based on products created from the combustion process. The water quench which follows the secondary combustion chamber (SCC) quickly cools the combustion gases, so that the gases spend a minimum amount of time in the temperature range that favors formation of dioxin/furans. The most recent performance test for dioxin/furans demonstrated emissions at less than 2 percent of the permitted rate. Operation of the water quench and performance test results assure compliance with this limit.

## **PFCs**

A literature search was performed by the MPCA to look at thermal destruction of PFCs and related substances. Thermal degradation studies have been performed by the University of Dayton Research Institute, many for the purposes of supporting the Hazardous Waste MACT. One study, titled "Laboratory-Scale Thermal Degradation of Perfluoro-Octanyl Sulfonate and Related Substances" by Takahiro Yamada and Philip Taylor, was prepared in response to a request from 3M to address destruction of PFCs and related substances in an incinerator. This study concluded that temperatures of 900 °C (~1650 °F) demonstrated high levels of destruction. This study also concluded that there was no quantifiable amount of PFCs and related substances generated from the combustion process. In addition, the actual day to day operating temperature of the kiln is above the limit to ensure compliance with the permit.

## **Principle Organic Hazardous Constituents (POHCs)**

The Destruction and Removal Efficiency (DRE) for Volatile Organic Compounds (VOC) was measured based on the DRE of a representative sample of the most difficult to destroy POHCs. The representative POHCs measured to determine the DRE consisted of 2 compounds listed as Class 1, and one compound listed as Class 2 in the Thermal Stability-Based Incinerability Ranking for Hazardous Organic Compounds, where Class 1 compounds are the most difficult. This index is referenced in EPA trial burn guidance documents, and is produced by The University of Dayton. The demonstration of destruction efficiency of compounds of a specific class is considered demonstration of the ability of the device to adequately destroy the other compounds of that class and any lower class. (Appendix D of the "Guidance on Setting Permit Conditions and Reporting Trial Burn Results, Volume II" EPA).

The non-3M waste solvents must meet the waste codes that are specified by the hazardous waste permit. The chemicals constituents of these waste codes will consist of Class 1 or lower compounds which have already been demonstrated to meet DREs. Any compounds which are lower than Class 1 (i.e. Class 2, 3, etc.) will be destroyed at higher DREs. The emissions of HAPs will have equivalent of better DRE than VOC, therefore the calculation for a potential increase in emissions from VOCs is a good approximation of the potential increase in emissions of HAPs, which is less than 0.035 ton/year.

### **3.2 Fuel Comparison Emissions Analysis**

3M has decreased the amount of liquid solvent waste it has generated throughout North America as a result of recycling efforts and reformulation of products. This decrease has required the use of natural gas to supplement the kiln in order to maintain the required temperatures. The Permittee prepared calculations compare the potential change in actual emissions as a result of burning liquid solvent waste instead of natural gas, by comparing the amount of natural gas burned in 2007, with an equivalent amount (BTU value) of liquid solvent waste burned, and looking at how the change affects the total emissions as reported in the 2007 emission inventory.

3M has accepted limits on the amount of outside solvent waste received (400,000 mmBtu/yr). In response to public comment, and after negotiations with 3M and the leader of the COCCGC, the hazardous waste permit now includes specifications on the non-3M waste that include a minimum BTU value of 8000 Btu/lb, a maximum ash content of 15 percent by weight, a maximum chlorine content of 15 percent by weight, and the waste is further defined as bulk waste used to supplement 3M waste as an alternative to natural gas and fuel oil. Calculations using these limits show worst case projected increases, when compared to natural gas, for particulate matter and VOCs of approximately 2.02 tpy and 0.035 tpy respectively. These increases do not represent an increase in Potential to Emit and therefore do not represent an emissions increase under state and federal air quality regulations.

### **3.3 Applicability of NESHAPs**

#### **3.3.1 Subpart EEE**

40 CFR Part 63, Subpart EEE – NESHAP from Hazardous Waste Combustors. The original standards for Subpart EEE were promulgated on September 30, 1999, and the replacement standards (current rule) were promulgated on October 12, 2005, and amended on October 28, 2008. For compliance with the replacement MACT standards, an existing source is defined as a source that has not commenced construction or reconstruction after April 20, 2004. 3M began constructing the replacement kiln September 1997, and therefore is classified as an existing source.

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 (CAA) and the Resource Conservation and Recovery Act (RCRA). Historically, the overlapping of CAA 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. RCRA permit MND 006 172 969 is modified to delete those conditions. Where requirements address the same topic, the facility must meet the more stringent.

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 (CPT) and submitting a Notice of Compliance (NOC) to the permitting authority. The CPT was completed on October 16, 2009, and the NOC was submitted June, 2010.

The Memorandum of Agreement (MOA) between the MPCA and US EPA, dated February 28, 2005, specifies that the enforcement authority of Subpart EEE remains with US EPA. The MPCA declined delegation of this standard. Part III, paragraph (B)(2) of the MOA.

#### **3.3.2 Subpart DD**

40 CFR Part 63, Subpart DD – NESHAP 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 CAA requirement; and Part 264 subpart BB says that owners of equipment subject to a corresponding CAA requirement may elect to determine compliance by documenting compliance with the relevant CAA 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. MPCA plans to permit the facility such 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 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 CAA 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 CAA regulation codified under 40 CFR part 60, part 61, or part 63.” The Permittee must fully comply with all applicable 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 CAA regulations at 40 CFR parts 60, 61, and 63.

Should the CAA 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 CAA 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 owners of any of the equipment subject to Part 264, subpart BB that is also subject to the CAA 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 by the Permittee 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 CAA.

“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 CAA (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 CAA.

“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 CAA, as amended (42 U.S.C. 7401 et seq.)”.

### **3.4 Periodic Monitoring and CAM**

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.

For CAM, the Permittee submitted a CAM proposal as required by 40 CFR § 64.3. It can be found in Attachment 1 to this TSD. Requirements for CAM are found in Table A of the permit under subject items EU 008, CE 004, and CE 010.

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.

The table below summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

**Table 7. Periodic Monitoring**

EU/GP	Requirement (rule basis)	Additional Monitoring	Discussion
GP 001 Equipment Leaks Subject to Subpart V	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. Subpart BB allows that if any of the equipment subject to 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.
GP 002 Containers Subject to Subpart PP	40 CFR 63.920	Operating standards	Permittee shall follow the packaging and handling requirements and perform inspections according to Subpart PP.
GP 003 Tanks Subject to Subpart OO	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.
GP 004 Tanks Subject to Subpart DD	40 CFR 63.680	Design Criteria and Inspections	The Permittee shall follow the design criteria and inspection requirements of Subpart DD.
EU 008 Replacement Rotating Kiln	40 CFR 63, Subpart EEE, Emissions Limits, Feedrate Limits, Operating Limits	Recordkeeping, Performance Testing, Operating Requirements, Monitoring	This unit incorporates feedrate limits, continuous emission monitoring systems (CEMs) and other continuous monitoring systems (CMS) such as thermocouples, pressure transducers, and flow meters. Comprehensive performance tests (CPTs) are required every 5 years, and confirmatory performance tests are required 2.5 years after each CPT.
	Minn. R. 7017.2020, subp. 1	Performance Testing	Performance tests are required to verify emission factors used for calculating emissions inventory. Factors must be used from tests that were performed in the last 10 years. The last test was March 28, 2001. The updated tests are required for NO <sub>x</sub> , SO <sub>2</sub> , F, HF, and opacity.
EU 014	SO <sub>2</sub> ≤ 0.5 lbs/MMBtu  Opacity ≤ 20%  (Minn. R. 7011.2300)	none	The emergency generator uses natural gas; therefore, the likelihood of violating either of the emission limits is very small. The Permittee can demonstrate that this unit will continue to operate such that emissions are well below the emission limits by only burning natural gas. Since this is a permit condition, the semi-annual deviations report will document any deviations from this condition. Design based PTE for the generator, using AP-42, is 0.084 lb/MMBtu compared to the rule limit of 0.5 lb/MMBtu.

### **3.5 Insignificant Activities**

The 3M Corporate Incinerator has several operations which are classified as insignificant activities. These are listed in Appendix C to the permit. Tanker Truck cleaning activities were inadvertently omitted from the insignificant activities list in the previous permit and have been added. Calculations were provided to show emissions would be less than 0.6 ton/yr.

### **3.6 Permit Organization**

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements.

### **3.7 Comments Received**

The MPCA placed the Air Emission and Hazardous Waste permits on combined public notice and held a combined public informational meeting on April 10, 2012.

Public Notice Period: March 7, 2012 – April 23, 2012

During the public notice period, the MPCA received 107 comments from concerned citizens and governmental units on the Air Emission and Hazardous Waste permits. The Response to Comments document is included as Attachment 2 to the TSD.

A petition was filed requesting the preparation of an Environmental Assessment Worksheet (EAW). This petition was denied by the MPCA Citizen's Board on May 22, 2012.

A request for a Contested Case Hearing was filed by the Coalition of Concerned Cottage Grove Citizens (COCCGC) on the Air Emission and Hazardous Waste permits. This request was denied by the MPCA Citizen's Board on June 26, 2012.

The MPCA Citizen's Board approved issuance of the Air Emission and Hazardous Waste permits on June 26, 2012.

EPA 45-day Review Period: March 7, 2012 – April 23, 2012

EPA submitted comments on the permit during the review period. The response to these comments is included in the Response to Comments document. EPA's comments were addressed and on May 4, 2012, EPA submitted a letter stating that they no longer had any concerns with the permit.

## **4. Permit Fee Assessment**

This permit action is the reissuance of an individual Part 70; therefore, no application fees apply under Minn. R. 7002.0016, subp. 1 to the changes that are covered by the reissuance application. However, the permit action rolls in one additional permit application to which fees do apply. Attachment 5 to this TSD contains the MPCA's assessment of Application and Additional Points used to determine the permit application fee as required by Minn. R. 7002.0019. The changes covered are for the major amendment application. The action also includes the incorporation of a NESHAP, however this was an existing standard that applied to the facility and is not a chargeable activity (i.e., the standard was not triggered by the modifications requested in the permit applications – it falls under a permit reopening being incorporated in the reissuance).

## **5. Conclusion**

Based on the information provided by 3M, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 16300025-002 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Trevor Shearen (permit writer/engineer)  
Bob Beresford (enforcement)  
Curt Stock (stack testing)  
Bruce Braaten (peer reviewer)

AQ File No. 23AI; DQ 2804, 2440, 1230

Attachments: 1. CAM Plan  
2. Response to Comments  
3. Facility Description and CD-01 Forms (in Delta)  
4. Calculations (in Delta)  
5. Points Calculator (in Delta)

Attachment 1: CAM Plan

**AQ ID: 16300025, 3M Cottage Grove Corporate Incinerator**

***Unit/Pollutant for CAM Plan: EU 008, Replacement Rotating Kiln/SO<sub>2</sub>***

## **I. BACKGROUND**

### **A. Emission Unit:**

Replacement Rotating Kiln – EU 008, CE 010

### **B. Applicable Regulation, Emission Limit and Monitoring Requirements:**

Applicable Regulations/Emission Limits:

Permit limit to avoid major source of PSD for SO<sub>2</sub>

- 95 tons/yr;

Monitoring Requirements: (Established during most recent performance test, October 2009.)

- Minimum Blowdown from Quench and Subcooler combined: 194.0 gpm using 1-HRA
- Maximum Quench Exit Temperature: 182°F
- Subcooler Recirculation Water Flow: 3,250 gpm using 1-HRA
- Subcooler Water Pressure: 19.40 psi using 1-HRA
- Minimum Subcooler pH: pH of 1.5 using 1-HRA

### **C. Control Technology (pollutant controlled)**

CE 010 – Venturi Quench + Subcooler used to control HCl for MACT EEE and also removes SO<sub>2</sub>.

## **II. MONITORING APPROACH**

3M Company proposes to use compliance with the current permit operating limits in the permit to satisfy CAM for SO<sub>2</sub> for the Rotating Kiln. The facility is required to operate Continuous Monitoring Systems (CMSs) to monitor the above operating limits as part of the current Title V permit. 3M Company will continue to operate the CMSs.

1. Indicator: Compliance with the permit limits listed above.
2. Indicator Range: Permit Limits listed above
3. Performance Criteria:
  - Data Representativeness – Indicator ranges established in current stack testing.
  - Verification of Operational Status – CMS requirements in the current permit will address operational status.
  - QA/QC – CMS requirements in the current permit will address QA/QC.
  - Monitoring Frequency – continuous and 1-HRA

1-HRA – 1 Hour Rolling Average

## Attachment 2: Response to Comments

### Minnesota Pollution Control Agency 3M Hazardous Waste Incinerator Permit Reissuance Hazardous Waste and Air Quality Permits

#### RESPONSES TO COMMENTS ON THE DRAFT PERMITS

The Minnesota Pollution Control Agency (MPCA) received nearly a hundred comments from concerned citizens, including the Coalition of Concerned Cottage Grove Citizens (COCCGC), various law enforcement agencies, US Environmental Protection Agency (EPA), and others during the comment period from March 7, 2012, to April 23, 2012. For the approximately 100 comments from individual citizens, rather than responding to each comment individually, the MPCA has combined similar comments from these and responded to those comments at one time.

#### **1. Comments by citizens, general public. Comment letters received during the comment period.**

**Comment 1-1:** Commenters expressed concern that 3M is saving money by accepting non-3M hazardous waste at the expense of human health or the environment.

**Response:** Profit or cost savings have never been considered in the MPCA analysis in MPCA permitting decisions. Whether or not 3M saves money was not a consideration in how these permit applications were processed and did not have any bearing on any requirements in the permits. The proposed hazardous waste permit prohibits 3M from accepting payment or other compensation for management of wastes generated by non-3M sources, although that permit requirement is not an effort to prevent 3M from operating its hazardous waste incinerator (Facility) at a cost savings. The requirement prohibiting 3M from accepting payment or other compensation is to prevent the Facility from being a "commercial" hazardous waste incinerator, as that term is defined under federal water permitting rules.

**Comment 1-2:** Commenters expressed concern that this permit and its new limits are a step in the wrong direction.

**Response:** All emission limits in the proposed air emission permit were reduced or remain unchanged in this permit compared to the current permit. Emission limits were reduced for Total Particulate Matter, Semi-Volatile Metals (Lead and Cadmium), Low Volatile Metals (Arsenic, Beryllium and Chromium), Hydrochloric Acid and Chlorine Gas, and Mercury. These limits are based on applicable federal standards, however the mercury limit is a state-only limit that is more stringent than applicable federal standards. No emission limits have increased in the proposed air emission permit.

The proposed hazardous waste permit includes an updated Waste Analysis Plan (WAP), and an updated Human Health Risk Assessment (HHRA). Overall, the requirements in these permits will strengthen the permits, or make them more restrictive, compared to the current permits.

**Comment 1-3:** Commenters say that the MPCA is not doing its job.

**Response:** The MPCA fulfilled its obligation to draft permits that ensure compliance with all applicable state of federal statutes and rules and that protect human health and the environment. In addition, MPCA has worked for the past three years with the City of Cottage Grove and its Environmental Task Force, concerned citizens, Washington County, and EPA to incorporate many requirements into these permits, which significantly strengthen the permits to limit emissions. The WAP has been strengthened to provide more sampling and analysis of the incoming waste stream, a requirement has been added for 3M to update the 2004 HHRA, limits on the type and quantity of non-3M waste have been added, and limits on Mercury have been reduced.

**Comment 1-4:** Several commenters requested that the MPCA do a risk assessment.

**Response:** A HHRA was conducted in 2004 and the conclusion was that “routine emissions from this facility do not pose an acute health hazard to the public.” The Permittee is required in its Hazardous Waste Permit to conduct an updated HHRA using new guidance developed by EPA. The HHRA Work Plan is due to the MPCA for review and approval within 90 days after the effective date of the permit. The permit also requires that if an updated HHRA shows that potential unacceptable human health risks exist due to emissions from the 3M incinerator, the Commissioner will modify the Permit to address the risk.

**Comment 1-5:** The Facility is located less than one mile from a school.

**Response:** Some parts of the 3M Cottage Grove campus may be located within one mile of a school, however there are no schools within one mile of the Incinerator stack. Nevertheless, the HHRA evaluates maximum health risks whether they occur at the property fenceline, within one mile of the facility, or beyond.

**Comment 1-6:** Some commented that there must be a better way to manage this waste.

**Response:** Currently, incineration is an accepted method of hazardous waste treatment and is preferred to land disposal under Minnesota Statutes § 115A.02 (b).

**Comment 1-7:** Comment states that residents of Cottage Grove are inordinately affected by pollution from 3M and other sources, or that Cottage Grove is one of the highest polluted areas or has the highest cancer rates in the metropolitan area and that this project will add to this problem.

**Response:** The emissions related to the proposed permits will be unchanged from previous authorized emissions as recently as approximately 2006. Nevertheless, the MPCA has looked at available information, in preparation for the May 22, 2012, board meeting, on potential health effects related to ambient air quality in Cottage Grove to see if there is any evidence in the MPCA’s files that would support a conclusion that cumulative health impacts related to ambient air quality in Cottage Grove are significantly different compared to other areas of the state.

The MPCA has established a network of air monitoring stations to gather baseline ambient air toxics concentration data at various locations throughout the state. These baseline measurements are intended to characterize ambient air concentrations of specific air toxics in rural, urban, and suburban locations in Minnesota from all air emissions sources. The MPCA’s monitoring efforts were not designed to provide specific information on the cumulative impact of air toxics in a specific geographical area; however, the data provide information that can be used to represent background conditions in a screening level analysis evaluating cumulative impacts.

The MPCA has determined that ambient air quality is affected by emissions from three primary source categories: point sources, area sources, and mobile sources. Point sources are typically large stationary sources (e.g., power plants, refineries and this proposed permit). Area sources are also often stationary, but are generally smaller sources of emissions, such as dry cleaners, gasoline service stations, residential furnaces, and fireplaces. Mobile sources include cars and trucks used on the road and non-road sources, such as lawn and garden equipment, recreational equipment (e.g., boats and ATVs), construction equipment, aircraft, and locomotives. MPCA’s 2005 emissions inventory shows that mobile sources contributed roughly 64 percent of the total mass of air toxics emissions to the air in Minnesota, area sources contributed approximately 22 percent and point sources approximately 14 percent.

The MPCA has also summarized ambient monitoring data collected from 2005 to 2007. Data from the nine monitoring stations located in cities with intermediate population densities (Apple Valley, Chaska, Rosemount, Newport, St Paul Park, and Duluth) were averaged to represent air concentrations in other cities with intermediate population densities that do not have monitoring stations. Cottage Grove falls

in the intermediate population density range. The MPCA estimated risks from these monitoring locations by comparing measured concentrations of potentially carcinogenic pollutants to respective inhalation health benchmark concentrations and summing the resulting ratios. The average total cancer risk from the nine monitoring locations was approximately 40 in 1,000,000. This is within the EPA's excess cancer risk goal range of 1 to 100 in 1,000,000. The average chronic non-cancer risk ratios from the nine monitoring locations were summed in a similar manner. The total of the non-cancer risk ratios based on monitoring data was approximately one. MPCA's non-cancer guideline for a single facility contribution is also one.

As a further comparison, the results from intermediate population density areas representing Cottage Grove were compared with results from data collected from monitors in cities with high population density (six monitors are located in the Twin Cities metropolitan area) and with data collected in rural Minnesota. The estimated intermediate city cancer risk (4 in 100,000) for cities like Cottage Grove is lower than that estimated for more densely populated urban areas (approximately 5 in 100,000) but is higher than the rural cancer risk estimate (2 in 100,000). The average non-cancer risk ratio for intermediate population density communities (approximately one) is estimated to be the same as the non-cancer risk ratio for urban areas (also approximately one) and higher than the rural estimate (0.6).

To further determine whether there was evidence supporting the need for additional cumulative risk assessment in relation to the proposed permits, the MPCA used a statewide risk modeling screening tool (MNRisks) to compare modeled risks of nine suburban communities (Blaine, Burnsville, Cottage Grove, Crystal, Eagan, Eden Prairie, Fridley, Hugo, and Plymouth). Cottage Grove modeling results were the second lowest for both cancer and non-cancer risks based on maximal and mid-range estimates. For this reason, the MPCA finds that the evidence does not demonstrate the need for additional health risk assessment related to the contribution of this Facility to cumulative environmental effects.

Also, the Permittee is required in their Hazardous Waste permit to update its 2004 HHRA. The permit requires that if an updated HHRA shows that potential unacceptable human health risks exist due to emissions from the 3M incinerator, the Commissioner will modify the Permit to address the risk.

**Comment 1-8:** One common comment is that 3M affected the groundwater in the past and that property values have been affected. A similar comment is that the facility should not be built close to the community.

**Response:** This permit reissuance is not expected to affect water quality. The facility has been at this location since 1971. The MPCA does not evaluate property values.

**Comment 1-9:** Comment states that this facility has a poor compliance history.

**Response:** The compliance history of the facility includes two major violations prior to 1990. The MPCA executed a Stipulation agreement with 3M on December 20, 1988, for air violations observed during an April 15, 1988, inspection and subsequent visible emissions readings. The Stipulation agreement included a \$95,000.00 civil penalty. A second Stipulation agreement was executed on June 28, 1989, which included both State and Federal air and hazardous waste permit and rule violations, as a result of air emission performance tests conducted between December 15, 1988, and May 19, 1989, and a hazardous waste inspection conducted on May 30, 1989. This Stipulation agreement included a \$1,500,000.00 civil penalty.

Both of these violations were for the old incinerator prior to replacement with a new incinerator and new pollution control system in 2001. The old incinerator was replaced with the new incinerator to avert further compliance issues and to come into compliance with the new federal maximum achievable control technology (MACT) standards.

Since reissuance of the Hazardous Waste Incinerator Permit in 2005, there have been about 12 separate compliance inspections conducted by State, Federal or Washington County officials. There have been violations observed on four of these inspections dealing with storage and labeling of hazardous waste containers, manifest paperwork, contract employee training, and financial assurance. These violations were cited in a Letter of Warning, issued in 2007, and in an Administrative Penalty Order, containing an \$8,600 penalty in 2009. The MPCA did not consider these violations to be egregious or to demonstrate a pattern of noncompliance. These violations have all been corrected. Many of these issues are similar to those often observed at other hazardous waste facilities and none of these actions had the direct potential to affect human health or the environment.

**Comment 1-10:** Comment says that there are not enough inspections of the facility.

**Response:** As a permitted facility, the 3M incinerator is inspected for compliance with its permit by state or federal officials at least once every two years and by Washington County officials at least once per year. Also, state permit engineers visit the site at least once every five years during the permitting process and state and federal stack test experts are on site at least every five years during stack testing. In the MPCA's experience, this inspection schedule, coupled with recordkeeping and reporting requirements, is satisfactory to ensure compliance.

**Comment 1-11:** Comment asked what would happen if there were an emergency situation at the facility.

**Response:** Minnesota hazardous waste rules require facilities to prepare and update plans and provide training to respond to emergency situations. Part IV of the Hazardous Waste permit titled "Emergency Procedures" includes requirements for implementation of the Contingency Plan, preparedness and prevention, emergency coordinators, response to spills/leaks/releases from regulated units, response to spills from non-regulated units, notification to MPCA regarding spills/leaks/releases, containment measures, and reporting requirements. The permit and Hazardous Waste rules also require that 3M submit a copy of its Contingency Plan to all local police departments, fire departments, hospitals, and all local and state emergency response teams that may be called upon to respond in an emergency situation at the Facility. The Facility is in compliance with the facility standards governing contingency planning preparedness and prevention, emergency procedures, and arrangements with local authorities for emergencies according to Minn. R. 7045.0462 through 7045.0468.

**Comment 1-12:** Several people commented that meth waste should not be treated in the incinerator.

**Response:** Only law enforcement waste that meets the definition of "controlled substances" under 21 CFR pt. 1308 and that are within one of the permitted waste codes may be accepted at the Facility. Only a small fraction of wastes generated from law enforcement activities will qualify as controlled substances may be accepted at the 3M incinerator. Other wastes associated with meth production are not considered controlled substances and will be managed by law enforcement under a separate waste disposal system. Incineration is an accepted method of treatment of methamphetamine as well as other legal and illegal controlled substances. The MPCA has heard from Minnesota law enforcement officials that there may be controlled substance wastes which have been stockpiled while awaiting a disposal option so there may be an initial surge in waste needing processing, but even this amount is expected to be very small. This is because the permit restricts materials to only a small subset of legal or illegal drugs and pharmaceuticals.

**Comment 1-13:** Several people commented that they don't want 3M to accept non-3M waste materials.

**Response:** There is no rule or regulation currently in place that gives MPCA the authority to deny the request to accept non-3M waste materials. The facility is currently operating with actual emissions well below all of their emission limits. This change is expected to increase actual emissions only slightly compared to burning natural gas and total actual emissions are expected to be similar to what this facility was emitting in the recent past (2006) when 3M was generating more of their own high British thermal unit (BTU) waste solvents.

In conversations with citizens in the past it has been related to MPCA that there is the concern that allowing non-3M waste materials is "cracking open the door" or allowing the first step for 3M to become a commercial incinerator. Even though the Air Quality or hazardous waste rules do not distinguish between captive or commercial facilities, and regulations do not change depending on the origin of the waste, the MPCA has worked with 3M and the City of Cottage Grove to ensure that 3M cannot achieve the intent or status of a "commercial incinerator." It is reasonable to assume that a commercial facility is one that would operate for profit and would accept any type of hazardous waste that it is allowed to be incinerated by rule or regulation. A commercial facility is one that would accept payment from the generator to destroy the waste to ensure that the waste is not a future liability to the generator. The 3M hazardous waste permit prohibits 3M from accepting any payment or other compensation for non-3M wastes. Hazardous waste comes in many forms. Hazardous waste can be in the form of a gas, a solid, a pumpable or non-pumpable sludge, or several different types of liquids. The 3M hazardous waste permit only allows non-3M waste to be in the form of a liquid as they can only accept "bulk" hazardous waste. A commercial facility could accept any one of the 450 or so waste codes that are allowed to be incinerated. The 3M permit restricts 3M to accepting only five waste codes that are wastes common to the printing, coating and painting industries and are similar to the bulk of the hazardous material that 3M generates. A commercial facility could accept any amount of waste material within its permitted throughput capacity. The 3M hazardous waste permit restricts the volume of non-3M material to 400,000 million Btu's per year of hazardous waste. Permit restrictions in the hazardous Waste permit do not allow 3M to operate as a "commercial" facility.

**Comment 1-14:** Commenter ask MPCA to set emission limits at levels closer to actual emissions.

**Response:** All emission limits in the proposed air emission permit are within the regulatory requirements. Emission limits are set based on air quality thresholds for federal regulation applicability (PSD, 40 CFR § 52.21), applicable federal standards (Hazardous Waste Combustion MACT, 40 CFR Part 63, Subpart EEE), and/or state standards. 3M operates within these emission limits and has not had a history of non-compliance with these limits. 3M has accepted a lower limit for mercury at the request of the MPCA to help relieve community concerns about mercury emissions. There are several other types of limits or operating requirements in the hazardous waste and air emissions permits to ensure that the actual emissions are well below the permitted limits. Requirements for sampling and analysis, throughput limits, pollution control equipment operating parameters, recordkeeping and reporting are all in the permits to ensure that the facility is operating properly and below permitted limits.

**2. Comments by Law Enforcement Agencies including Dakota County Sheriff David D. Bellows; Anoka County Sheriff James Stuart; Minnesota Sheriffs' Association Director James D. Franklin and Minnesota Chiefs of Police Association Director David Pecchia; City of St. Paul Chief of Police Thomas Smith; and Minnesota Department of Public Safety Director Ramona Dohman. Comment letters received during the comment period.**

**Comment 2-1:** Just one of the letters is copied below because similar issues dealing with the problems disposing of controlled substances are found in all of the letters.

Dear Mr. Kvaal and Mr. Shearen,

I am writing you to support the issuance of Air Emission Permit No. 16300025-002 and Hazardous Waste Facility Permit No. MND006172969 to 3M Company for their facility located at 10746 Innovation Road, Cottage Grove, Washington County, Minnesota. I also support the provision in the permits that allows 3M to accept and dispose of controlled substances from Minnesota Law Enforcement Agencies as a public service.

The issuance of these permits, including the provision allowing 3M to accept and dispose of controlled substances will greatly assist Minnesota Law Enforcement Agencies. Currently,

Minnesota has no facility that will accept controlled substances for destruction that are not either prescription drugs or plant based material. The majority of the controlled substance cases that we hold evidence for do not fall into the prescription drug or plant based material category.

The choices we have at this time include; simply holding all of our non plant based drug material in our evidence rooms or paying to transport it out of Minnesota to be destroyed. Both of those options present significant problems to Law Enforcement Agencies. Storing drugs that are eligible to be destroyed is problematic in that it fills our evidence rooms and paying for the drugs to be transported for destruction creates an unnecessary increase to operational cost which has an impact on taxpayers. The transportation of drugs by third party for destruction also creates security issues.

Space in evidence rooms at my Office is always at a premium and I am sure that it is for many other Agencies. The property in an evidence room needs to be returned to the owner, auctioned, or destroyed, when possible, so we can continue to take in evidence from new cases.

The drugs that we hold as evidence and that are eligible for destruction have no legitimate purpose and can be destroyed as soon as they are not needed for the case. Drugs that are eligible for destruction should be destroyed in a timely manner to avoid the evidence rooms from pushing maximum capacity. It would not take a very long time for our evidence rooms to become full if we simply warehouse these drugs.

There are also several issues that come to mind when we pay to have drugs transported outside of Minnesota to have them destroyed. One issue would be the cost of transporting the drugs for destruction. There is a company that can be used to do this, however, the cost associated with this procedure is quite high. Another potential issue facing Agencies is being able to be sure that their drugs were in fact destroyed in a safe manner and that they were indeed destroyed. As a law enforcement community we work hard to remove the drugs from our streets and homes in our communities and to minimize the damage that they cause. I would hate to think that the drugs we work so hard to protect our communities from could either be disposed in an unsafe manner or diverted back onto the street to be used in another community. I would prefer that my staff witness the destruction of these drugs to ensure this.

If permits were issued to 3M, including the provision in the permits that allows 3M to accept and dispose of controlled substances from Minnesota Law Enforcement Agencies as a public service, it would greatly assist Minnesota Law Enforcement Agencies and the general public. This would provide a very cost effective and safe solution to a problem that is currently plaguing Minnesota Law Enforcement Agencies.

Please feel free to contact me if you have any questions or concerns.]

**Response:** The hazardous waste permit allows, under the conditions of the permit, controlled substance wastes, as defined in 21 CFR pt. 1308, from Minnesota law enforcement agencies that have been seized or collected as a result of law enforcement activities ("Law Enforcement Wastes"). 3M is required as a condition in the permit to develop and maintain internal procedures for 3M acceptance of Law Enforcement Waste and instructions for law enforcement agencies on how to manage these wastes. These procedures and instructions are required to be submitted to the MPCA for review and approval. The amount of controlled substance waste is expected to be on the order of 1/100<sup>th</sup> of one percent of the total of waste coming to the Facility. As a result, it is highly unlikely that controlled substance waste will affect emissions.

### **3. Comments from COCCGC, Comment letter received on April 23, 2012.**

**Comment 3-0.1:** Generally, COCCGC expressed frustration and growing impatience at the slow progress of issuance of the permits for the Facility.

**Response:** Part of the reason for delays in reissuance of the permits was the willingness of the MPCA to include various stakeholders such as COCCGC, in the permit review process prior to the public notice period. The MPCA staff attended several open meetings with the City and citizens and had several working meetings with City staff to discuss conditions of the permits. The MPCA incorporated several recommendations into the permits from the Cottage Grove Environmental Task Force, which was formed to study the incineration issue. The MPCA also worked closely with EPA for two years to address issues raised by EPA, including revisions to the WAP, and incorporating requirement to conduct an updated HHRA. The result of this additional process is a better permit that is more protective of human health and the environment.

**Comment 3-0.2:** The Air Emission Permit and Hazardous Waste Facility Permit take notice of 3M's request, in the form of an air permit amendment, to begin burning large amounts of hazardous waste, originating entirely outside 3M, in its Cottage Grove "corporate incinerator." This request, if granted by the PCA, would reinforce the status of the incinerator as a "Commercial Hazardous Waste Combustor" subject to different and more restrictive NPDES effluent guidelines. Ironically, Clean Air Act permitting does not make the same distinction between "commercial" and other waste combustors as does NPDES permitting.

**Response:** Neither the Clean Air Act nor the Hazardous Waste rules use the term "commercial incinerator" and thus the incinerator would not be regulated any differently under the proposed permits as a result of where the waste comes from. The National Pollutant Discharge Elimination System (NPDES) rules defines a "commercial hazardous waste combustor" as one that meets certain requirements and accepts remuneration or payment for accepting the waste. MPCA included a condition in the hazardous waste permit, as recommended by the City of Cottage Grove Environmental Task Force, that restricts 3M from accepting payment for non-3M hazardous waste.

**Comment 3-0.3:** It is not clear if the permit application is an enforceable document and how this relates to the actual permit? Would you please clarify?

**Response:** The Hazardous Waste Permit Application is an enforceable part of the hazardous waste permit (See the cover of the hazardous waste permit). The application for the air emission permit is not an enforceable document.

**Comment 3-1.0:** [Information presented by the MPCA at the April 10, 2012, public meeting for supporting this permit change were not credible or beyond the scope of the MPCA.]

**Response:** Without details of the information presented at the public meeting that the commenter claims were not credible or were beyond the scope of the MPCA, the MPCA is unable to provide a specific response to this comment. MPCA staff strives to develop and present information on proposed permits that is grounded in accurate technical information that has been subject to rigorous review. MPCA staff cannot, however, control whether recipients of the information find it credible.

**Comment 3-1.1:** Volume at 3M has dropped and they no longer have enough waste to burn. We believe this is part of the normal business cycle and should not be used by the MPCA in the decision making process.

Based on the Semi Annual Deviations Report submitted to the MPCA, the 3M Cottage Grove Hazardous Waste Incinerator did have a drop in operating hours, but they are back up to historic levels:

2007 – 6956.4 hrs.  
2008 – 6849.8 hrs.  
2009 – 5622.4 hrs.  
2010 – 5712.6 hrs.  
2011 – 6700.4 hrs.

It appears the 3M Cottage Grove Hazardous Waste Incinerator had a downturn in operating hours during the economic slowdown that impacted all businesses. It should not be the responsibility of the MPCA to change a permit to allow increased pollution as a result of a general economic condition that impacted the country. The current permit allows 3M to make an acquisition anywhere in North America and bring large amounts of additional hazardous waste to the 3M Cottage Grove Hazardous Waste Incinerator. It would be more appropriate for the MPCA to realize it is the owner's responsibility, 3M Cottage Grove Hazardous Waste Incinerator, to not operate in order to conserve resources and reduce costs in economic slowdowns. This common sense business practice would save Natural Gas, eliminate the need for auxiliary fuel, and reduce pollution.

**Response:** 3M has indicated that it does not have enough high BTU waste to maintain operating temperatures in the incinerator to achieve adequate treatment of all waste and that it has had to supplement the hazardous waste with natural gas to maintain operating temperatures in the incinerator. 3M proposes to take non-3M hazardous waste rather than supplement with natural gas. The MPCA does not have jurisdiction to dictate where the waste managed and treated at the Facility comes from since neither the hazardous waste rules nor the Clean Air Act regulate the source of the hazardous waste treated in a hazardous waste incinerator as long as the incinerator has the controls necessary to treat the waste. In this case, to allay community concerns 3M has agreed to limit the amount of non-3M waste that it takes and those limits have been included in the permit.

The operating hours of the facility from year to year may be an indicator of the total amount of waste that is needed to be treated in any given year, however the operating hours do not indicate the amount of high BTU waste or natural gas required to maintain kiln temperatures.

**Comment 3-1.2:** 3M claims that they will increase profits by \$2,000,000 per year by reducing the amount of Natural Gas used at the 3M Cottage Grove Hazardous Waste Incinerator. We request to see the calculation.

The Coalition does not believe the \$2,000,000 number. There is a general lack of trust in 3M and a growing lack of trust in the MPCA. With the litany of statements increasing the savings, residents are concerned that there is another reason for this permit change that is not being communicated. In April, 2009 3M held a Public Meeting and claimed they could save \$750,000 with this proposal. In March, 2010 the MPCA representative at a community leaders meeting claimed it would save 3M \$1,000,000 with this proposal. Now 3M and MPCA are stating \$2,000,000. Between April, 2009 and today the price of Natural Gas has declined 75 percent. With all the other environmental issues and lack of trust with 3M in the surrounding communities, the numbers need validation or should not be used.

**Response:** See Response to Comment 1-1.

**Comment 3-1.3:** At the public meeting it was stated by the MPCA that the additional non-3M Fuel Grade Liquid Hazardous Waste would only result in one or two more trucks a day. We request you define fuel grade solvent as it was defined in the November, 2000 permit and add it to the current draft permit under auxiliary fuels. The 3M permit application only lists natural gas and #2 fuel oil as supplemental fuels. Specifications exist for Natural Gas and #2 Fuel Oil. If non-3M Fuel Grade Liquid Hazardous Waste is to be used as an auxiliary fuel, a specification and definition is needed.

Many residents have learned through this permit process that what is stated in a meeting does not necessarily match what is allowed in the permit. We want statements made by the MPCA to match what is in the permit so there is accountability. With the new permit limits, 400,000 million Btu per year and the worst case scenario in the air technical support document of 5,000 Btu per pound, which would equate to 80,000,000 pounds and another 2,000 tank trucks each carrying 40,000 pounds of non-3M Fuel Grade Liquid Hazardous Waste. Operating 330 days a year it is approximately six tank trucks a day.

In the first permit that covered the new incinerator, dated November of 2000, and in previous permits, Natural Gas, No. 6 Fuel Oil, and blended hazardous waste solvents meeting specifications as defined in the permit were listed as auxiliary fuels. We have been told that this will be a fuel grade liquid hazardous waste. The MPCA should again put in the current draft permit the definition for auxiliary fuel and the specification for Fuel Grade Solvent as was written in the November of 2000 permit, which was approved by the EPA and accepted by 3M.

Fuel Grade Solvent  
>12,000 BTUs/lb  
<0.5% ash  
<5% Chloride

In addition to reducing the number of tankers to 830 or 2-3 a day and get the number of tank trucks closer to what has been told to the public, it would also allow for one believable number for the impact of increased emissions to be calculated.]

**Response:** In response to this comment, and after negotiations with 3M and the leader of the COCCGC, the hazardous waste permit now includes specifications on the non-3M waste that include a minimum BTU value of 8000 Btu/lb, a maximum ash content of 15 percent by weight, a maximum chlorine content of 15 percent by weight, and the waste is further defined as bulk waste used to supplement 3M waste as an alternative to natural gas and fuel oil.

Despite the Coalition's interest in characterizing the non 3M hazardous waste as an "auxiliary fuel" or "fuel grade solvent," in fact, by definition it is hazardous waste. In addition, there are serious regulatory and legal implications to characterizing hazardous waste as fuel. The MPCA is unwilling to identify the non-3M hazardous wastes as fuel that could have other regulatory and legal consequences. The comment does not dispute that the non-3M hazardous wastes are covered by the existing hazardous waste codes that limit the wastes 3M may treat at the Facility. These codes already define the materials.

The MPCA does not have the regulatory authority to dictate the type, source, or amount of waste accepted by 3M and has restricted the amount and general parameters of the waste as voluntary limits, which were accepted by 3M. The number of trucks per day is not a regulatory requirement and is not used in any permit conditions, rather presented only as an estimate as an informational item, as citizens had expressed concerns about truck traffic.

In the presentation the MPCA was trying to provide numbers that would be best estimates or "typical" numbers for informational purposes only. Based on the new specifications and permit limits, updated calculations for trucks indicate a likely range of 2-3 trucks per day, with a worst case of 3.3 trucks per day, and updated calculations for actual emissions compared to natural gas likely resulting in increased

emissions of particulate matter and VOCs less than 1.0 ton/year and 0.015 ton/yr respectively, with a worst case of 2.0 ton/year and 0.035 ton/yr respectively. The MPCA staff also toured a potential supplier of non-3M hazardous waste and was told that the BTU value of their fuel blend is above 10,500 Btu's/lb.

**Comment 3-1.4.1:** During the public meeting it was stated by the MPCA that this proposal will help meet the EPA RCRA goals and implied that the current method of disposal of the proposed non-3M Fuel Grade Liquid Hazardous Waste was not adequate. We request information that states what is deficient in the EPA regulations and the Missouri PCA regulations in regards to emissions from cement kilns.

**Response:** The MPCA staff's actual statement was "It is the MPCA's position that this proposed project embodies the intent and goals of the Minnesota and federal hazardous waste program." The point of this statement was that disposal in the 3M incinerator is considered the best available control technology and in general would be expected to provide better overall control than a cement kiln.

**Comment 3-1.4.2:** One thought expressed was that this would help conserve a scarce Natural Resource (Natural Gas is now a surplus) by burning non-3M Fuel Grade Liquid Hazardous Waste. If you look at the RCRA site <http://www.epa.gov/region2/waste/goals.htm>, waste minimization is the primary goal and it is hard to understand how by burning this waste for free creates an incentive for the waste generators to spend time or money on waste minimization.

**Response:** The following is the exact language from the public meeting presentation:

"2. Conserve energy and natural resources. The 3M proposal will conserve energy and natural resources by greatly reducing the amount of fossil fuels now being used to maintain operating temperatures needed to achieve the best available control"

The word "scarce" was not used in the presentation of Minnesota and federal hazardous waste program goals or the commentary that followed and the point of scarcity or surplus of a natural resource was not taken into account as it is not a part of the regulatory program goals. The point of the presentation was to state the EPA RCRA goals and to state how the project meets those goals. The goal is to "conserve energy and natural resources." From 3M's perspective, burning hazardous waste rather than natural gas conserves energy and natural resources. Natural gas has been portrayed as a clean fuel, and for the most part it is, but there are emissions from combustion of natural gas and new production methods using fracking techniques have been seen to cause environmental concerns of their own.

As a waste generator, 3M is required by Minn. R. 7045.0262 and 40 CFR § 262.27 to certify that it has undertaken efforts to minimize the amount of hazardous waste it generates. Other generators of hazardous waste are required to do the same. The existence of a hazardous waste treatment facility has no bearing on the responsibility of hazardous waste generators to meet their waste minimization obligations under state and federal law.

**Comment 3-1.4.3:** During the public meeting the MPCA stated many times that they have no choice but to follow EPA Regulations. The non-3M Fuel Grade Liquid Hazardous Waste would be coming from a fuel blender located in Wisconsin and regulated by the Wisconsin PCA. This waste is currently being sent to a cement kiln in Missouri. The MPCA indicated that bringing the proposed non-3M Fuel Grade Liquid Hazardous Waste the 3M Cottage Grove Hazardous Waste Incinerator will be better than sending it to a cement kiln in Missouri. In fact the Director of the Industrial Division stated this on camera for KSTP <http://kstp.com/article/stories/S2575988.shtml>.

Cement Kilns that burn hazardous waste are regulated by the EPA <http://www.epa.gov/epawaste/hazard/tsd/td/combust/finalmact/index.htm>. The MPCA should state where the EPA is deficient in the regulation and by what authority the MPCA should intervene its opinion over the Missouri PCA. The Cement Kiln in Joplin, Missouri actually produces a product where as the 3M Cottage Grove Hazardous Waste Incinerator only produces pollution. Is the cement kiln in violation of EPA or Missouri PCA rules or regulations? If the MPCA has no choice but to follow EPA regulations in the Air and RCRA permits for the 3M Cottage Grove Hazardous Waste Incinerator, why does the MPCA feel it is your responsibility to intervene and disrupt a business in Missouri that is following EPA regulations? The information on fuel blender and cement kiln was obtained under the Freedom of Information Act and can be made available.

The MPCA should focus on their mission in the state of Minnesota "The MPCA mission is to work with Minnesotans to protect, conserve and improve our environment and enhance our quality of life." Let the EPA handle the national issues and Missouri PCA handle Missouri issues. It would be interesting to know if Joplin, Missouri has the same ground water, surface water, or soil contamination that we do in the communities surrounding the 3M Cottage Grove Hazardous Waste Incinerator."

**Response:** The MPCA's perspective is that the protection of human health and the environment from the potential hazards of waste disposal. Hazardous waste is a byproduct of items we use to improve our quality of life. The intent of the 3M incinerator is to manage these wastes in a manner that protects human health and the environment to the greatest extent possible using the best available control technology. Typically these types of waste would be burned in a cement kiln which generally would not have the level of control of the 3M incinerator.

This perspective was for general informational purposes and not intended as a definitive statement of fact. It has no bearing on any requirements in the permits.

**Comment 3-1.5:** For the better part of two years the residents have been told there will be no increase in the Potential to emit. In the recent materials made available by the MPCA for the Public meeting there was a significant change in VOC based on a calculation factor change. How could the original numbers for VOCs be used for so long and be communicated to placate the public and be wrong? We would like to know how the TRI numbers are estimated for the 3M Cottage Grove Hazardous Waste Incinerator. Are the TRI numbers impacted by the change made in the table for actual facility emissions? If so, how far back will they have to go to meet the SARA 313 requirements?

There is a change between Table 1 on page 23 of the 2005 permit technical support document and Table 1 on page 2 of 10 in the 2012 permit technical support document? (Doc5) In the 3M Document and the 2005 Technical Support table both state:

Total Facility Limited Potential to emit VOC in tpy – 10.3

Total Facility Actual emissions of VOC in tpy – 3M Document – 1.1

Total Facility Actual emissions of VOC in tpy – 2005 Technical support table – 2.3

In the 2012 Technical Support table:

Total Facility Limited Potential to emit VOC in tpy – 40.2

Total Facility Actual emissions of VOC in tpy – 25.9

In January / February 2009, 3M requested a minor permit amendment application to allow use of non-3M supplemental fuel waste as an alternate fuel at the 3M Cottage Grove Hazardous Waste Incinerator. 3M states "Managing these wastes will not result in an actual or potential increase in emissions or discharges of pollutants into the environment.

3M submitted a discussion paper to the MPCA stating "there will be no increase in the potential to emit (PTE) from the 3M incinerator when accepting non-3M supplemental fuel and hazardous law enforcement agency wastes.]

**Response:** One of the goals in processing the reissuance of a permit is to correct any errors that may have been made in the past. In this instance, the MPCA permit engineer was not able to verify the origin of the 10.3 tpy limited PTE that was in the technical support document (TSD) for the 2005 permit.

Appendix 4 of the 2005 permit contains emission calculation forms submitted by the facility. Form EC-01 lists the Maximum Controlled Emissions of the incinerator stack (SV 010) as 0.13 tpy. This form did not list a value for Limited Controlled Emissions. Whereas a Limited PTE calculation would base the calculation on a permit limit (20 ppm), the maximum PTE calculation on this form was based on an emission factor using data from a CEMS (0.32 ppm). Further in this appendix there are other calculations of maximum controlled emissions from other units; SV 009 – 7.79 tpy, SV 002 – 1.05 tpy, and FS 001 – 9.24 tpy from valves, 1.75 tpy from pump seals, and 8.63 tpy from Connectors/Flanges. SV 009 and SV 002 have since been removed from the facility and are not included in the current draft permit. It is not clear from the numbers in the Appendix from the 2005 permit how the value listed in the 2005 TSD was determined.

The calculation of limited PTE for the new draft permit was based on the incinerator stack alone. The other stacks with VOC emissions have been removed, and fugitive emissions are not required to be included under the Part 70 permit program. An equation to calculate limited PTE from a permit limit given in ppm was used. This equation was a function of the permit limit, maximum flow rate of the gas, molecular weight of VOC, and the gas temperature at the stack exit. The calculation of limited PTE for the draft permit used a realistic worst case for stack temperature, and conservative values for the emission rate (permit limit vs. CEMS data) and molecular weight of VOC (weighted average molecular weight of VOCs in the gas vs. molecular weight of methane).

**Comment 3-1.5.1:** As a result of comments presented at the public informational meeting, the MPCA staff became aware that the COCCGC did not clearly understand the dioxin limit in the permit.

**Response:** The dioxin limit in the 2005 Air Emission permit contained the exact language of the interim MACT emission standards as found in 40 CFR 63.1203(a)(1)(i)-(ii), where paragraph (ii) applies to sources which operate wet particulate control devices. The dioxin limit in the 2012 draft Air Emission permit contains the language of the replacement MACT emission standards found in 40 CFR § 63.1219(a)(ii).

The MACT interim and replacement emission standards clearly state that the higher dioxin limit applies to sources which cool the gas to below 400 degrees Celsius prior to the particulate control device, and the replacement emission standards further clarify that the higher dioxin limit also applies to sources not equipped with either a waste heat boiler or dry air pollution control system.

The effect of quickly cooling the exhaust gases results in a minimum amount of time where the exhaust gases are in the temperature range where dioxins are formed. Performance test results have confirmed that dioxin emissions are well below the emission standard.

**Comment 3-2.0:** Request that continuous emission monitors for lead and total hydrocarbons be installed.

During the public meeting it was stated that the air quality monitor located on the 3M Cottage Grove Hazardous Waste Incinerator will be able to tell if there is an increase emissions from the 3M Cottage Grove Hazardous Waste Incinerator when it starts to burn non-3M Fuel Grade Liquid Hazardous Waste. Has any statistical correlation study been done to determine if there is any relationship between that is emitted from the 3M Cottage Grove Hazardous Waste Incinerator stack and what will be recorded at the air monitor? The height of the stack, the velocity at the stack exit, and the close proximity of the air monitor would indicate that the correlation factor would be very low if any.

The Coalition believes that continuous air monitors for lead and total hydrocarbons should be added to the stack on the 3M Cottage Grove Hazardous Waste Incinerator. It is the best way to monitor compliance on a single point source. The calculations used to report lead emissions have too many variables starting at the waste generators. Emission issues will result from short term variation. A twelve hour rolling average based on theoretical calculations based on estimated concentrations marked on the drum by generators do not account for the real world short term variation in the hazardous waste incineration process, but could be shown by the use of continuous emission monitors at the stack exit.

It appears that the feedrates were adjusted from the 2005 permit levels to meet the new MACT emission limits in the 2012 permit based on the results of the most recent Comprehensive Performance Test. It appears that the feedrates for Semi volatile metals (As, Be, Cr) and Low volatile metals (Pb and Cd) were reduced at a much higher percentage 20 percent to be able to meet a 5 percent tighter emission limits. Does this mean there were compliance issues in the reported calculated emissions? A Continuous Emission Monitor should be put on the stack at the least for LVM – lead]

**Response:** Performance testing at the Facility measures the capture and removal efficiency of lead.

Based on the test results, a range of removal efficiencies is measured and the lowest (most conservative) value is used to calculate the feedrate of lead to the system to ensure compliance with the emission limit. The actual removal efficiency of lead by the control equipment is likely to be higher than the value used, and the feedrate limit is further reduced by the Facility to ensure compliance with the permit. Additionally, the Facility has operated in compliance with permitted emissions limits in the past. For these reasons, the MPCA is confident that the Facility will remain in compliance with its emission limits and that CEMS on the stack is not necessary.

The feedrate limits for Semi-Volatile Metals (SVM) and Low-Volatile Metals (LVM) are determined based on the requirements set forth in the approved performance testing protocol. There were some changes in the testing protocol for the 2009 test that were more restrictive than previous tests. One change is that a minimum removal efficiency is needed to be used to determine feedrate limits, as opposed to an average removal efficiency used in the past, this provides for a more conservative limit. There was also a maximum scale-up value defined in the test plan which stated that values demonstrated during the test could only be relied upon within a small range. The LVM feedrate determination was affected by this, which leads to the Maximum Theoretical Emission Concentration (MTEC) calculation that demonstrates the worst case emissions will be well below the emission limit. The minimum removal efficiency measured showed an increase in removal efficiency from previous tests. So while the LVM emission limit was reduced by 5 percent and the feedrate limit was reduced by 20 percent, it was due to the restrictions in the test plan, and is not an indication of compliance issues.

**Comment 3-2.1:** The November, 2000 permit required a total hydrocarbon monitor. Yet we have been told one does not exist. Was there ever a total hydrocarbon monitor on the system? The facility was only authorized to operate for 30 hours per calendar quarter without the THC analyzer. If the THC analyzer was not in place, was the incinerator shut down? There should have been a functional THC analyzer in place in 2000 and it should still be part of this permit.

**Response:** The facility previously operated a total hydrocarbon (THC) monitor as required by the 2000 permit. 3M found that the THC monitor experienced regular, ongoing technical issues that interfered with obtaining good data. When the Hazardous Waste Combustion MACT standard went into effect, the more reliable CO monitor was used, as allowed by the MACT standard, and the THC monitor was decommissioned. Data has shown that CO emissions are a very good indicator of THC emissions, as both are a direct measure of combustion efficiency. The MPCA is confident that THC emission standards are being met on a continuous basis through the use of a CO monitor.

**Comment 3-3.0:** Clarify if there are or are not burners in the secondary combustion chamber and current permit language to reflect that determination.

The air permit states the Secondary Combustion burners have been removed and the burner inlets welded shut. The 3M application, as recent as January 25, 2012, lists a waste lance in the Secondary Combustion Chamber as a feedstream. In table A, feedrate limits, you give the Secondary Combustion Chamber a process throughput rate of 300 lbs per hour.

This appears to be a permit writing issue unless 3M is being allowed during the life of this permit the ability to open and use the Secondary Combustion Chamber to feed waste.

Is the Secondary Combustion Chamber allowed to burn hazardous waste or have all feed systems been removed and will the permit be changed to accurately reflect the status?]

**Response:** The burners in the secondary combustion chamber (SCC) have been removed as stated in the TSD for the proposed permit. Some wastes, such as pressurized gases or volatile liquids, do not require the residence time of the combustion chamber, and can be fed directly into the SCC, this requires the use of the waste lance to feed to the SCC but not the burners that have been removed. The Hazardous Waste MACT allows for waste to be fed directly into the SCC, when a performance test demonstrates that the technique meets applicable standards. This technique was included in the most recent performance test and included in the permit. The waste lance feed method provides operational flexibility for the facility, but is not used at all times. The language in the draft permit is appropriate.

**Comment 3-4.0:** We do not believe the Law Enforcement Waste can be managed as outlined in the permit without violating the Community Right to Know Act. (EPCRA) and other requirements listed in the draft permit.

In January / February 2009, 3M requested a minor permit amendment application to allow use of non-3M supplemental fuel waste as an alternate fuel at the 3M Cottage Grove Hazardous Waste Incinerator. 3M states "At the request of the MPCA, we are also asking to allow 3M to process regulated hazardous wastes from Minnesota Law Enforcement.

For regulated hazardous wastes from Minnesota Law Enforcement, will a waste stream profile exist? If only a packing slip is used, how will you meet the requirement Prior to feeding material, obtain an analysis of each feedstream that is sufficient to document compliance with the applicable federate limits in 40 CFR § 63.1209?

Any emissions as a result of burning law enforcement waste would have to be reported as part of 3M TRI emissions to meet Community Right to Know Act. How will this be accomplished if the hazardous

waste is not analyzed? As mentioned in 3M WAP, the waste stream should be sampled and analyzed frequently at the beginning until some statistical confidence level can be established.

In the application it states "For all wastes managed at the incinerator, including non-3M wastes, a waste stream profile must be completed before the waste is accepted at the 3M facility." How will this happen with Law Enforcement Waste?

Will the waste stream profile be specific and unique to the generator for Minnesota Law Enforcement waste or will 3M be allowed to use generic profile with large ranges in constituents? If generic profiles are used with wide ranges how will the TRI information be calculated? If the specific generator location is not part of the Waste Stream Profile and an environmental or health issue occurs at a later date will there be a chain of custody to the generator?

3M will have its own unique profile that also identifies the generating facility. 3M stated that they want to bring in non-3M Fuel Grade Liquid Hazardous Waste from a fuel blender. Will the unique profile identify the facility where the waste was created or only the location of the fuel blender? If the specific generator location is not part of the Waste Stream Profile and an environmental or health issue occurs at a later date will there be a chain of custody to the generator?

In the event the Permittee receives a shipment of hazardous waste that the Permittee is not authorized to receive and store at the Facility. The Permittee shall reject the waste or immediately notify the MPCA... How will this work on Law Enforcement Waste since it states it can't be stored?]

**Response:** Section 6.8 of the WAP, "Wastes Exempted from Sampling Requirements" is an enforceable part of the Hazardous Waste permit, and allows for certain types of waste to be exempted from sampling requirements due to the nature and small volume of the waste. EPA WAP experts helped draft the language for the updated WAP and agreed that law enforcement controlled substance waste fit into this category because of the small volume of this type of waste that will be brought to the facility and because analysis of the waste at the facility poses a potential exposure hazard to facility employees.

The EPA WAP experts worked with 3M and MPCA for over four months to revise and update the WAP to ensure that waste is inspected, sampled and analyzed to a degree that will assure compliance with the permitted limits. Law Enforcement Controlled Substance Waste is defined in the permit as materials identified in 21 CFR pt. 1308 and is expected to be a small part of materials seized or collected by law enforcement based on this restrictive definition. The quantity of material is expected to be very small (less than 1/100<sup>th</sup> of 1 percent of the total waste) and the materials are expected to be fully destroyed in the incinerator.

The EPA and MPCA recognize that this proportionally small amount of waste will not be opened or sampled at the 3M Incinerator for safety and security reasons and both EPA and MPCA agreed to this approach. The Hazardous Waste Permit requires 3M to: "develop and maintain internal procedures for 3M and instructions for law enforcement agencies on how to manage these wastes," which are required to be submitted to the MPCA for review and approval. Because federal regulations require controlled substance waste to be destroyed using specific procedures, waste will be accompanied by law enforcement guards to the facility to witness the destruction and a certificate of destruction will be issued to the Law Enforcement Agency by 3M. Language from the 3M WAP regarding Law Enforcement Controlled Substance Waste is as follows; "Law enforcement wastes will be accompanied by a detailed packing slip in lieu of this analysis. Waste that does not conform to the waste stream profile and/or the acceptance specifications set forth by 3M will be rejected and returned to the Generator." Destruction of this material in the 3M Incinerator has always been seen as a benefit to the entire Minnesota law enforcement community and a public service to the State. This service is seen as a practical solution to the system of storage and disposal that presents significant problems to the law enforcement community for safety and security reasons.

All of the waste from non-3M sources will be sampled and analyzed prior to shipment to 3M and again prior to treatment at 3M. The detailed waste profile is more important for those wastes that are not to be sampled and analyzed prior to treatment. In theory, 3M generated waste streams may not require the same level of sampling and analysis as non-3M waste streams as 3M generated the waste stream and could generate a more accurate waste stream profile. All hazardous waste is subject to the manifesting program which tracks waste from cradle to grave.

Law enforcement controlled substance waste will not be subject to a processing limit, but the volume of controlled substance waste burned is expected to be less than 1/100<sup>th</sup> of 1 percent of the Facility's total waste, as calculated based on law enforcement estimates. Given the small amount of controlled substance waste, the type of material incinerated, the high heat, and the quality of the control equipment used to limit emissions, the MPCA finds that there is little to no likelihood of negative environmental or human health impacts from incinerating law enforcement waste at the 3M Facility, nor will there be a measurable amount contributing to the overall Toxic Release Inventory (TRI) emissions.

All law enforcement waste will be accompanied by a law enforcement officer to oversee the destruction of the material and receive a certificate of destruction. If for some reason the material is rejected, the accompanying law enforcement officer would maintain custody of the material and remove it from the Facility.

**Comment 3-5.0:** Emergency Response and Community Awareness

In the event of a major incident (like the WRR fire), has an analysis been completed to show how big an area would be impacted in the Worst Case Scenario? Is there a plan for notification? With the advent of cell phones, some homes no longer have land lines. Is there a plan on how to communicate the need to evacuate a large portion of the community? What is the estimated time to complete the notification and what percentage of the target group is estimated to be contacted?

When was the last time that a shelter-in-place exercise took place in the community? Do Businesses, Residents, Schools, and Churches know how to do this? Is there any documentation?

**Response:** Part IV of the permit titled "Emergency Procedures" includes requirements for implementation of the Contingency Plan, preparedness and prevention, emergency coordinators, response to spills/leaks/releases from regulated units, response to spills from non-regulated units, notification to MPCA regarding spills/leaks/releases, containment measures, and reporting requirements. The facility is in compliance with the facility standards governing contingency planning preparedness and prevention, emergency procedures, and arrangements with local authorities for emergencies according to Minn. R. 7045.0462 through 7045.0468.

**Comment 3-6.0:** Fire Protection

There is a concern that the permit again allows for the storage of over 3,000,000 gallons of hazardous waste. It appears that the tank farm and bulk storage systems have been recently upgraded and adequate containment provided.

We are concerned that the largest amount of storage, 2,332,000 gallons, is in drum storage. From looking at past permits, it appears that the practice of using lined storage trailers has not changed or been upgraded since the 1989 permit. The storage trailers provide the least amount of containment, trailers are parked in close proximity of each other, and probably are not considered road worthy. Should there be a sprinkler system / water canon or something to minimize risk in case of fire or explosion?]

**Response:** The incinerator tank farm has a dry pre-piped deluge sprinkler system, which is designed with a foam eductor built in. Fire trucks can hook up to the system and are able to apply foam to all tanks. In addition, 3M has installed two fixed 750 gallon per minute (gpm) monitors to hydrants adjacent to the tank farm. A house hose is located in the immediate area of the tank farm and trailer storage area which houses two portable monitors which also have a flow rate of 750 gpm.

In addition to items located at the Incinerator, 3M has four portable monitors, two which are loaded on the fire trucks, and two in other hose houses on site that can be brought to the incinerator if necessary. 3M maintains a minimum of 3,000 gallons of foam concentrate at all times. Utilizing just the Emergency Squad's equipment, 3M has the capability of flowing water at a rate of almost 10,000 gpm.

3M can also apply foam to any of the trailers via either the portable monitors or from hand lines connected to trucks. There is sufficient hose to use either the monitors or hand lines from trucks, as the situation would warrant.

**Comment 3-7.0:** Job Titles and Duties

The residents were told at the MPCA Public meeting that the 3M Cottage Grove Hazardous Waste Incinerator was one of the, if not the most regulated facility in Minnesota. It is the most regulated because it represents a high degree of hazard. If this is the case and there is only one Hazardous Waste Incinerator, why is there is not a Compliance Officer listed on the chart? Does one exist? Does it report to someone not in charge of incinerator operations? Does the MPCA have a Compliance Officer assigned to this facility? Is there someone who works to insure daily compliance and not just perform random inspections?

**Response:** It is assumed that the chart being referred to is in Part IV.D. "Emergency Procedures" of the hazardous waste permit which lists the plant emergency coordinators and is specific to potential emergency situations. The MPCA has a compliance inspector assigned to review the facility's compliance with RCRA statutes, Minnesota Rules and State-issued RCRA permit and a compliance inspector who does air compliance review. There are several MPCA staff assigned to review compliance with various aspects of the incinerator operation. These reviews are conducted routinely, at least once every other year, and are generally not announced to 3M prior to the actual inspection. The Facility is also inspected by Washington County staff at least once a year, and may be inspected by EPA officials as well. Also the Facility is required to submit data to MPCA a minimum of two times annually, and some information is submitted quarterly. This data is reviewed for compliance during each applicable reporting period (quarterly or semi-annually).

**Comment 3-8.0:** Define statement in Specific Hazardous Wastes Authorized to be Managed.

3M is prohibited from accepting payment or other compensation for management of wastes generated by non-3M sources. Would you define "other compensation?"

**Response:** This requirement to prohibit payment is a voluntary requirement agreed to by 3M to assure the public that the facility has no intention of becoming a "commercial incinerator" even though this definition is not included in hazardous waste or air regulations. The term "other compensation" was added to be more inclusive and rule out forms of compensation other than a direct payment for a service.

**Comment 3-9.0:** PFC Destruction and Kiln and Secondary Combustion Operating temperature

The minimum operating temperature for the kiln was raised from the 2005 permit level of 1,620 degrees Fahrenheit to the 2012 permit of 1,760 degrees Fahrenheit. The minimum operating temperature for the Secondary Combustion Chamber remained the same at 1,710 degrees Fahrenheit. Is it safe to assume that the temperature was left the same as the 2005 permit level because waste is no longer being fed to the Secondary Combustion Chamber? If this is so, why wasn't this requirement documented in the old permit? Are the temperatures high enough in the SCC to dispose of organic waste gas?

We will make the assumption that the temperatures listed are the actual temperatures used when the Comprehensive Performance Test was ran. Knowing that 3M has burnt PFCs in the past, present, and probably will in the future, we are astounded that the state of Minnesota can have a lawsuit pending against 3M for the destruction and loss of use of certain natural resources due to the presence of PFCs, that there is no mention of PFCs in the Air Permit. Has the MPCA preformed a test or study to determine temperature and dwell time need for the complete destruction of PFOA or PFOS by incineration? Has the MPCA done a literature search to see what other Pollution Control Agencies in other countries require for temperature to completely destroy PFCs?

The Canada Acts and Regulations for PFOS state that breakdown occurs at elevated temperatures from 760 degrees Celsius to 982 degrees Celsius. At the 982 degrees Celsius, it would require a minimum operating temperature of 1,800 degrees Fahrenheit.

The Norwegian Pollution Control Authority report that analysis for PFOA in combustion tests of treated and untreated article at 1000 degrees Celsius showed no detectable level of PFOA. At the 1000 degrees Celsius, it would require a minimum operating temperature of 1,832 degrees Fahrenheit.

Have any PFOS Fire Fighting Foams been destroyed at the 3M Cottage Grove Hazardous Waste Incinerator? The UK Environment Agency has stated – "For disposal of PFOS- containing foams and firewater, the preferred option is high temperature incineration at 1,100+ degrees Celsius, it would require a minimum operating temperature of 2,012 degrees Fahrenheit.

At this point in time with PFC contamination in the water, soil, and a state law suit, it appears to us the MPCA is negligent or not in agreement with the state law suit by not having this issue covered in the permit. Will this be addressed?]

**Response:** The minimum operating temperature for the kiln and secondary combustion chamber (SCC) were determined based on the results of the most recent performance test. The performance test verified compliance with applicable standards at the minimum temperature and maximum feedrate to the SCC, and therefore those limits remained unchanged. The minimum operating temperature of the kiln measured during the performance test was higher than the minimum in previous permits, and therefore the minimum temperature limit for the kiln was increased.

A literature search was performed by the MPCA to look at thermal destruction of PFCs and related substances. Thermal degradation studies have been performed by the University of Dayton Research Institute, many for the purposes of supporting the Hazardous Waste MACT. One study, titled "Laboratory-Scale Thermal Degradation of Perfluoro-Octanyl Sulfonate and Related Substances" by Takahiro Yamada and Philip Taylor, was prepared in response to a request from 3M to address destruction of PFCs and related substances in an incinerator. This study concluded that temperatures of 900 degree Celsius (~1650 degrees Fahrenheit) demonstrated high levels of destruction. This study also concluded that there was no quantifiable amount of PFCs and related substances generated from the combustion process. In addition, the actual day to day operating temperature of the kiln is above the limit to ensure compliance with the permit.

**Comment 3-10.0:** Waste Analysis Plan

While it is good the permit would increase the WAP to 90 percent by mass, the COCCGC has a concern that 3M is one of the great material science companies and if 3M is allowed to bring in bulk solvents in the quantities they have requested, it is feasible that the increase in bulk liquid hazardous waste poundage would make it very easy to hit 90 percent by mass with minimal analysis of other items received. With the very large number of chemicals that 3M produces and purchases that have not been evaluated under TSCA, what percentage of the total chemicals will be analyzed under the new permit? What percentage of TSCA chemicals will be analyzed? What will be the percentage of containers (or units) being analyzed under the new permit excluding bulk liquid hazardous waste shipments?]

**Response:** The Waste Analysis Plan (WAP) has been revised and updated by WAP experts from EPA to make it as tight as possible without being overly burdensome to Permittees. The WAP in use by 3M in the current permit is in compliance with EPA WAP requirements as the WAP rules are very general and very broad. The revised 3M WAP which is a part of the proposed draft Hazardous Waste Permit is much more restrictive and includes a requirement for sampling and analysis of a higher percentage and a wider variety of wastes in accordance with EPA guidance. The revised 3M WAP requires 3M to run profile verification on 90 percent of waste received by mass and to verify a minimum of 100 low volume waste streams per year.

**Comment 3-11.0:** Failure to address tanker truck cleaning

We have carefully gone through all of the documents posted by the MPCA. After our review, we cannot find any reference to Tanker Truck cleaning. We know that this takes place on site using an outside contractor, but there is no reference to location on site, containment for the process, waste disposal requirements, or reporting of fugitive emissions. We have been led to believe that 3M already handles around 500 tankers a year. What has been the amount of fugitive emissions reported for this operation? With the new permit limits, 400,000 million Btu per year and the worst case scenario in the air technical support document of 5,000 Btu per pound, which would equate to 80,000,000 pounds and another 2,000 tankers. It would appear that the tanker cleaning operation performed on site NEEDS to be included in this permit. Will it be added to the draft permit?]

**Response:** 3M stated that emissions from tanker truck cleaning used to be in their permit under fugitive emissions but had since been removed as it was considered to be an insignificant activity. This activity was inadvertently left out of the 2005 permit insignificant activity list. As a result of this comment, 3M has redone and submitted the calculations that show that tanker truck cleaning is considered an insignificant activity according to Minnesota rules. Tanker truck cleaning has been added to the list of insignificant activities in the Air Emission Permit.

**Comment 3-12.0:** Liability Coverage

“Liability coverage for sudden accidental occurrences in the amount of at least \$1,000,000 per occurrence, with an annual aggregate coverage in the amount of at least \$2,000,000.” These are the same amounts as the 1989 permit. Why have the amounts not been updated?

**Response:** The liability amounts in the 3M Hazardous Waste Permit are the amounts that are required by the MPCA hazardous waste rules. EPA has similar liability amounts in its hazardous waste regulations.

**Comment 3-13.0:** Commercial Hazardous Combustor Category – If the air permit is issued the NPDES needs to be changed.

If this draft permit is implemented the NPDES permit should immediately be changed making the 3M Cottage Grove Incinerator a commercial incinerator and subject to the discharge limits. We have reviewed the email dialogue between the MPCA and the EPA. We believe some key information was overlooked.

1. These new waste streams will not be similar to wastes being generated and burned on the 3M Cottage Grove Hazardous Waste Incinerator site or at other 3M plants generating waste being sent to the 3M Cottage Grove Hazardous Waste Incinerator.

It has been stated in e-mails that the new waste will be coming from a fuel blender (WRR) in Wisconsin. The 3M Cottage Grove site and the 3M manufacturing facilities that generate hazardous waste sent the 3M Cottage Grove Hazardous Waste Incinerator are not in these market segments.

Candidate materials for the hazardous waste fuel/waste derived fuels program include:

- Almost every residue from industrial or commercial painting operations from spent solvents to paint solids including all of the wash solvents and pot cleaners
  - Metal cleaning fluids-originally these materials were primarily solvent based mixtures and blends. Currently, the fuel blenders are being asked to evaluate for use more of the metal working and machining lubricants, coolants, cutting fluids, and the like.
  - Electronic industry solvents-since these materials tend to be the higher value chlorinated/ fluorocarbon solvents, the fuels program generally sees the residues from recovery processing of these high cost materials, rather than the spent solvent itself. Oils and resins that are separated during recovery processing have excellent fuel values, and the trace metals contained become part of the cement clinker.
  - Automatic aftermarket operations-- Safety-Kleen Corp. reports serving over 400,000 customers nationwide including automotive body shops, maintenance departments and repair shops through its parts washer program. The dirty cleaning solvents picked up regularly typically get recycled with the clean solvent going back into parts washer service and residues sent for waste fuels use.
2. The only benefit listed for allowing non-3M Fuel Grade Liquid Hazardous Waste to be burned is for 3M's financial benefit. The amount of benefit 3M will receive is directly proportional to the amount non-3M Fuel Grade Liquid Hazardous Waste they burn.

3M is a for profit enterprise. When they receive money for product they deduct cost, report taxes, and record profits. When 3M owned National Advertising and was in the billboard market, a barter system was used and profits recorded. This proposal is similar to a barter system in that the compensation will be coming from a third party in reduced costs. In this case, 3M sales will not increase, but cost deducted will be reduced by \$2,000,000 and an additional \$2,000,000 will be subject to taxes, and the remainder reported as profit.

3. There is no public service or product stewardship associated with the burning of non-3M Fuel Grade Liquid Hazardous Waste.
4. The generating facilities of the non-3M Fuel Grade Liquid Hazardous Waste are not under the 3M Corporate structure.

A case could be made and would be accepted by the Coalition, if the only permit change was for Law Enforcement Waste that it would not become a commercial incinerator. We believe it meets the intent of the Clean Water Act. There will be no increase in 3M sales, cost will be increased (labor, handling,

equipment use etc..) and this will be reduce the amount of 3M revenue subject to taxes, and reduce the remainder that will be reported as profit.

**Response:** Since 3M is precluded from accepting payment or other compensation or remuneration for management of waste the definition of a commercial facility would not apply to the NPDES permit. This is a voluntary permit requirement that was recommended by the City of Cottage Grove Environmental Task Force for the expressed reason to prevent the incinerator from becoming a commercial incinerator.

**Comment 3-14.0.1: Human Health Risk Assessment**

It is our position that the Human Health Risk Assessment should be completed prior to the permit being acted on. When will it be performed?

Most of the Coalition Board members have dealt with many levels of government both in our professional and private lives. One thing we would unanimously agree upon is that dealing with government is a paperwork nightmare. Evidently the MPCA has found a way to eliminate paperwork. Unfortunately, in this case we believe it is to the detriment of the citizens and not in the spirit of the Community Right to Know Act. As you will read below from a April 18, 2012, communication from the MPCA, a permit change was incorporated to bring in a new waste stream without any paperwork, analysis, or calculations on impact to the community or the residents. The sole purpose was to solve a State of Minnesota problem and reduce State expenses.]

**Response:** The language from the permit regarding timing of the HHRA is as follows: "3M shall submit to the MPCA a work plan to update the 2004 HHRA to include the dry gas deposition of mercury pathway and to address other changes to the HHRA guidance and facility-specific conditions. The work plan shall include the air-modeling and risk assessment protocol and a proposed schedule for completion of the HHRA. The work plan shall be submitted to the MPCA for review and approval within 90 days after the effective date of this Permit." The schedule for completion of the HHRA will be included in the work plan and thus subject to MPCA review and approval. The MPCA will approve a schedule that ensures timely completion of the HHRA.

Although the EPA staff reviewing the permit said that normally if a Risk Assessment has shown acceptable risk, EPA would not generally require an updated risk assessment. However, EPA recommended that 3M update the risk assessment because the guidance for completing a risk assessment had been updated since 3M performed the risk assessment in 2004 and because of the level of public concern.

**Comment 3-14.0.2:** We request that detailed analysis take place on the impact on the community, accurate estimates on changes to potential TRI emissions, and detailed analysis on potential changes to EPCRA plans be made and implemented prior permit changes.

**Response:** Section 6.8 of the WAP, which is an enforceable part of the Hazardous Waste permit, allows for certain types of waste to be exempted from sampling requirements due to the nature of the waste. EPA WAP experts helped draft the language for the updated WAP and agreed that law enforcement controlled substance waste fit into this category due to the small volume and the inherent variable nature of the waste. Though this will be a relatively small volume of waste it is assumed that this material could include drugs with a high street value or materials that could be dangerous to those who would sample that material. For those reasons EPA and MPCA agreed that Controlled Substance Wastes would fit into the category of "Wastes Exempt from Sampling Requirements," which is allowed under the 3M WAP. It has been estimated that the amount of law enforcement waste could be less than 5,000 pounds in the first year and likely less than 1,000 pounds/year after that. Even at 5,000 pounds this is less than 1/100<sup>th</sup> of one percent of the total annual amount of material coming to the facility. This small amount would have no significant affect on emissions.

**Comment 3-14.0.3:** The Coalition of Concerned Cottage Grove Citizens believes it has rights guaranteed by the Federal Government in the Emergency Planning and Community Right-to-Know Act.

“(EPCRA) Authorized by Title III of the Superfund Amendments and Reauthorization Act (SARA), the Emergency Planning & Community Right-to-Know Act (EPCRA) was enacted by Congress as the national legislation on community safety. This law is designed to help local communities protect public health, safety, and the environment from chemical hazards.”

There is a lot of concern in our community that past waste management practices that met regulatory requirements did not protect the people or the environment. As a result of the current contaminated condition of this river valley, there is a natural lack of trust with the MPCA and 3M Company.

We feel as if we are a David against two Goliaths who both have tremendously more financial, legal, and human resources than our small resident’s organization. But there is one big difference. We are passionate stakeholders who live in this community! We will continue to challenge both the MPCA and 3M at every step possible in the permit process so that our legal rights are recognized and respected. We will continue to encourage both Goliath sized organizations, 3M and the MPCA, to act in a socially responsible manner and consider the current state of this river valley and future impacts of decisions being made today.

**Response:** Comment noted for the record

**4. Comment of private Citizen, Natalie Seim, Comment letter received on April 23<sup>rd</sup>, 2012.**

**Comment 4-1:** I was at the meeting earlier this month, and was amazed to hear the opposition so strongly against this issue. Whether I live in St. Paul or Milwaukee, WI if you have hazardous waste, you need to either bury it or incinerate it. We have seen what happens to material that is put in our ground water.

I would much rather have a facility burn at such high rate as the 3M Incinerator does to destroy most of the hazardous waste, then to bury it. The testing seems like it is going well. I have toured this and feel very safe through their processing.

Thank you for coming out to talk about this. I only wish I had felt comfortable to speak for the process, but I think many in our community are afraid of those who are so vocal.]

**Response:** Commenter's support of the permit is noted.

**5. Comment from Kim Labo, Clean Water Action, Comment letter received on April 23, 2012.**

**Comment 5-1:** Re: Proposed reissuance of a Hazardous Waste Facility permit to 3M Co.

Dear Mr. Kvaal,

On behalf of our 90,000 members in Minnesota, Clean Water Action is asking that an Environmental Impact Statement (EIS) be completed for the 3M hazardous waste facility and air emission permits for their incinerator at 10746 Innovation Road, Cottage Grove, Minnesota.

Environmental Impact Statement

3M Co. is requesting a modification to their air permit to increase allowed pollutant air emissions above historic emissions and incinerate new hazardous waste from the Minnesota Law Enforcement Agency and facilities from outside Minnesota. The increased levels and types of air pollutants, such as volatile organic compounds, and other pollutants, will likely have significant impacts on surrounding communities and particularly sensitive populations. An EIS needs to be completed to fully determine the possible impacts on sensitive populations due to emissions from the 3M incineration site.

Cumulative Impacts

We also have concerns about the potential cumulative effects borne by residents who live near the incinerator and an EIS should include an additional study of these impacts. The community of Cottage Grove already has a legacy of PFC contamination in their air, water, and soil from the 3M facility. An EIS should be performed to ensure the surrounding air quality will not deteriorate further.

We respectfully submit that an Environmental Impact Statement should be completed for the proposed modifications to the 3M Co. hazardous waste and air permit.

Sincerely,

Kim LaBo

**Response:** On May 22, 2012, the MPCA Citizens' Board voted to approve the Findings of Fact, Conclusions of Law, and Order to deny the petition requesting the preparation of an Environmental Assessment Worksheet (EAW) on the 3M Hazardous Waste Incinerator, Cottage Grove, Washington County, Minnesota. This decision completed the process for the consideration of a Petition for an EAW under the Minnesota Environmental Quality Board Rules, Minn. R. ch. 4410. Because the petition for an EAW was denied, the MPCA can now consider the proposed reissuance of the Hazardous Waste Permit and the Air Emissions Permit. Minn. Stat. S 116D.04, subd. 2b; Minn. R. 4410.3100, subp. 1.

**6. Comments by City of Cottage Grove Mayor, Myron Bailey, Comment letter received on April 20, 2012.**

**Comment 6-1:** Letter from City of Cottage Grove Mayor Myron Bailey to MPCA Commissioner.

Dear Mr. Aasen: The City of Collage Grove is grateful to the Minnesota Pollution Control Agency for their efforts to minimize the environmental impacts from the 3M Corporate Incinerator operated in the City of Cottage Grove.

In particular we appreciate that the MPCA proposes to include restrictions in the 3M Corporate Incinerator's Hazardous Waste Storage and Treatment Facility Permit (the "Hazardous Waste Permit" which regulate the treatment of materials generated at non-3M sources. These provisions, which were requested by the City of Collage Grove to address the concerns of our citizens, include the following:

- 1) 3M is prohibited from accepting payment or other compensation for management of wastes generated by non-3M sources
- 2) 3M is limited to processing a maximum of 400,000 Million BTUs per year of hazardous wastes from non-3M sources.
- 3) 3M is limited to manage bulk hazardous wastes from non-3M sources within the United States that have one of the following waste codes: D001, F001, F002, F003, F005 (Le. bulk solvent waste codes).
- 4) 3M is allowed to manage controlled substance wastes from Minnesota law enforcement agencies that have been seized or collected as a result of law enforcement activities.
- 5) 3M is required to update the Human Health Risk Assessment conducted for the incinerator to meet USEPA's revised Human Health Risk Assessment guidance documents.

We agree with MPCA's proposed improvements to the 3M Waste and Feedstream Analysis Plan, particularly those provisions that add requirements to test, monitor and evaluate all incoming wastes that were generated at non-3M facilities. We also support the Draft Air Permit's reduced allowable emission rates for several pollutants including total particulate matter, mercury, lead, cadmium, chlorine, arsenic, beryllium, and chromium.

Further, we acknowledge MPCA's efforts to help ensure that 3M complies with applicable hazardous waste and air emission regulations. MPCA regularly conducts both hazardous waste permit and air permit inspections at the 3M Corporate Incinerator and requires 3M to conduct air emission testing at the incinerator.

These efforts provide assurance to our citizens that 3M is meeting the permit requirements. To provide even greater assurance, the City requests the following of MPCA:

- 1) We request that MPCA conduct hazardous waste and air quality inspections in an "unannounced" manner. We believe that conducting unannounced inspections allows the Inspectors to see conditions that are more typical of day-to-day operations.
- 2) We understand that MPCA hazardous waste and air quality inspections occur about once every two years and that the hazardous waste inspections are often conducted concurrent with Washington County staff inspections. We request that MPCA perform inspections annually and also separate and stagger the inspections with Washington County so that inspections occur approximately every six months.
- 3) We hope that MPCA will continue its involvement with the City's ambient air quality monitoring near the 3M Cottage Grove facility. In particular, we request that MPCA analyze additional split samples collected from the monitors to help meet quality control objectives.

- 4) The Technical Support Document for the existing 3M Corporate Incinerator Air Permit shows a potential volatile organic compound (VOC) emission rate of 10.3 tons per year while the VOC potential emission rate shown in the Technical Support Document for the draft air permit is 40.2 tons per year. However, the allowable VOC emission rate from the incinerator is the same in the current and draft permit, 20 parts per million. We assume the 10.3 and 40.2 ton per year discrepancy is caused by using different calculation methods to convert the 20 ppm limit to a mass emission rate. The City requests that MPCA use a consistent calculation methodology to facilitate comparison of the potential annual emission rates from the two permits.
- 5) We understand the draft air permit requires a comprehensive emission test every 5 years and a second, less comprehensive emission test after 2.5 years. The City's Environmental Commission has recommended more frequent emission testing be conducted to confirm the facility is meeting the applicable emission limits. This testing is the best method of providing assurance for our residents that the facility is not having a negative impact on the community. The Environmental Commission would request emission testing to be conducted annually and at a minimum, conduct emission testing for VOC's and dioxin/furans.
- 6) The City of Cottage Grove encourages the MPCA to develop a state air toxics emission regulation. As a model, the MPCA could look to Wisconsin's air toxics rule found in the Wisconsin Administrative Code, Chapter NR 445. The Wisconsin rule regulates emissions over 600 air toxics. We believe such a rule would help lower emission rates of air toxins and therefore lower the health risks to the public from these compounds.

Again, we appreciate MPCA's regulatory efforts related to the 3M Corporate Incinerator. We look forward to continuing to work with MPCA to address environmental issues important to the citizens of Cottage Grove.

**Response:** Comments from the Cottage Grove City Council are noted. Responses to the additional requests 1)-6) are below.

- 1) The MPCA conducts compliance inspections at a wide variety of facilities. When possible, agency staff tries to conduct these inspections unannounced, but in situations where it is warranted, agency staff will set up the inspection with the facility ahead of time. There are various reasons for setting up the facility inspection ahead of time, which may include safety issues, timing issues, and coordinating with facility environmental and safety staff. There are also facility permit requirements in place to determine compliance, such as facility staff inspections, recordkeeping, and monitoring, that the facility is required by the permit to comply with. MPCA also coordinates with Washington County staff to best ensure the effectiveness and efficiency of their inspections.
- 2) The MPCA is authorized by the EPA to run the hazardous waste and air quality programs in the state. With that authorization the MPCA and EPA coordinate inspections for the federal fiscal year, because there is a large number of facilities that are required to be inspected and the inspection cycle for most of these facilities is every five years for hazardous waste. 3M has been and will continue to be on a 2 year inspection cycle. The MPCA continues to utilize its resources to insure that it meets federal commitments for all facilities. The MPCA balances its hazardous waste inspector resources to ensure compliance across the entire state. The MPCA will continue to respond to any compliance issues or complaints at the facility, regardless of the routine inspection cycle.
- 3) The MPCA is available to assist as needed with future monitoring performed by the City.
- 4) This comment was also submitted by the COCCGC. See the response to Comment 3-1.5.

- 5) Dioxin/furan compounds are not fed to the kiln, so the emissions are based on products created from the combustion process. The water quench which follows the secondary combustion chamber (SCC) quickly cools the combustion gases, so that the gases spend a minimum amount of time in the temperature range that favors formation of dioxin/furans. The most recent performance test for dioxin/furans demonstrated emissions at less than 2 percent of the permitted rate. Operation of the water quench and performance test results assure compliance with this limit.

The combustion chamber and SCC are designed to destroy VOCs. Performance test results show that the most difficult to destroy compounds are destroyed at levels almost 2 orders of magnitude beyond permit limits. This also indicates that all other organic compounds will be destroyed at even greater efficiencies than the levels reported in the test. The permit limits operation of the combustion chamber and SCC to ensure compliance with VOC limits.

Compliance with these limits is ensured with a large margin of safety for both of these limits such that more frequent testing is unnecessary.

- 6) Air Toxics: The City encouraged the MPCA to develop a state air toxics regulation similar to Wisconsin's air toxics rule with the goal of lowering emission rates of air toxins and lowering health risks to the public. The MPCA has similar goals but has used different tools to achieve those goals. In fact, the MPCA spent over 5 years attempting to develop air toxics regulation. From 1988 through 1993, the Minnesota Air Toxics Technical Advisory Committee met and discussed various versions of an air toxics rule that was similar to Wisconsin's air toxics rule, NR 445, effective in 1988. In 1994, the MPCA withdrew its draft air toxics rule citing the federal efforts underway with air toxics reduction requirements in the 1990 Clean Air Act National Emission Standards for Hazardous Air Pollutants (NESHAP). Since the mid-90's, EPA has promulgated a NESHAP for dozens of source categories. With EPA's focus on reducing the risk from facilities, the MPCA has adopted the following strategy to address air toxics and lower risk and emissions statewide:

- Implement the numerous federal air toxics (NESHAP) standards at facilities statewide
- Conduct a source-specific risk assessment for priority sources (new construction, those requiring an EAW)
- Monitor air toxics statewide to better understand actual, on the ground concentrations
- Use a risk screening tool developed by the MPCA to model multipathway, multipollutant human health risks from air toxics statewide. The use of this tool has helped the MPCA to identify priority air pollutants (diesel particulate, dioxin, PAHs, acrolein and PM<sub>2.5</sub>) and their primary sources to target for risk reductions.

**7. Comments by Cottage Grove Area Chamber of Commerce, Comment letter received on April 23, 2012.**

**Comment 7-1:** The Cottage Grove, Newport and St. Paul Park area is fortunate to have a diverse and solid base of businesses which make this a vibrant community in which to live, work, do business and most of all; prosper. The support of city government is key among the many factors which determine the success of any business, large or small, retail or industrial, new or well established.

As an established business owner in this area for 23+ years I feel it is important for the citizens and government officials to recognize the importance of the 3M plant that has been a valuable member of this community for most of my life. Some key points:

- 3M is a significant presence in the city of Cottage Grove area-contributes to the economic vitality, supports community efforts. Chamber, ect.
- The proposed incinerator permit is a cost effective and environmentally sound option for 3M's ongoing operations.
- 3M has worked extensively with the MPCA, EPA and Washington County for the past 3+ years to address citizen, technical and regulatory questions and concerns. At this point these 3 agencies are in agreement with the proposed permit modifications

This type of permit modification is a positive business impact which helps support the local Cottage Grove economy. As a representative of the businesses in Cottage Grove, Newport, and St. Paul Park, I ask that the cities support my effort to keep businesses competitive, which is vital to maintaining a strong presence in the community. We must be able to respond to the tough economic challenges we all face by controlling our costs to match spending to business volumes. By enabling individual businesses to remain competitive, we all stand to benefit from a more viable business community.

I ask that you keep these aspects in mind as you continue to manage city ordinances, permits, zoning, taxation, regulations and other initiatives, especially during this difficult economic climate.

Cottage Grove Area Chamber of Commerce, Vice President

Sherry

**Response:** Commenter's support of the permits is noted.

**8. Comment from Genevieve Damico, United States Environmental Protection Agency, Region 5.**  
**Comment received in a letter received on April 23, 2012.**

**Comment 8-1:** The Technical Support Document (TSD) describes the activities allowed by this permit action (002) as a "reissuance and a major amendment to allow additional sources of non-3M hazardous waste for incineration in the kiln." The TSD discusses the change in potential emissions from the non-3M sources of waste in terms of PM and VOCs. However, there is no information in the TSD that indicates the change in potential HAP emissions associated with the increase in incinerator of non-3M hazardous waste. Please provide additional information in the TSD, including emissions calculations, that demonstrates the change/increase in emissions attributed to the major amendment action, including individual and combined HAPs.

**Response:** The Destruction and Removal Efficiency (DRE) for Volatile Organic Compounds (VOC) was measured based on the DRE of a representative sample of the most difficult to destroy Principle Organic Hazardous Constituents (POHCs). The representative POHCs measured to determine the DRE consisted of 2 compounds listed as Class 1, and one compound listed as Class 2 in the Thermal Stability-Based Incinerability Ranking for Hazardous Organic Compounds, where Class 1 compounds are the most difficult. This index is referenced in EPA trial burn guidance documents, and is produced by The University of Dayton. The demonstration of destruction efficiency of compounds of a specific class is considered demonstration of the ability of the device to adequately destroy the other compounds of that class and any lower class. (Appendix D of the "Guidance on Setting Permit Conditions and Reporting Trial Burn Results, Volume II" EPA).

The non-3M waste solvents must meet the waste codes that are specified by the permit. These waste codes are also specified by the current and past permits. The chemicals constituents of these waste codes will consist of Class 1 or lower compounds which have already been demonstrated to meet DREs. Any compounds which are lower than Class 1 (i.e. Class 2, 3, etc.) will be destroyed at higher DREs. The emissions of HAPs will have equivalent of better DRE than VOC, therefore the calculation for a potential increase in emissions from VOCs is a good approximation of the potential increase in emissions of HAPs, which is less than 0.05 ton/year.

**Comment 8-2:** Potential to Emit (PTE) calculations for VOCs were completed using a weighted average molecular weight based on the measured amounts of each component from a 2001 Trial Burn. Please explain how the results from this Trial Burn, which occurred over 11 years ago, will be representative of the emissions from the proposed project, especially the regulated hazardous waste from Minnesota law enforcement agencies.

**Response:** The trial burn in 2001 measured DRE of POHCs. The POHCs that were chosen to be measured during the 2001 trial burn were specified in the test plan as being representative of the most difficult to destroy organic compounds found in the hazardous waste feedstream as discussed in the response to Comment 1.

The Comprehensive Performance Test (CPT) performed in October 2009 was as required by 40 CFR § 63.1207(c)(3), and results for POHC DRE were submitted as data as allowed by 40 CFR §63.1207(c)(2) to meet the requirements of the initial CPT under the replacement standards. Future recurring CPTs will be required to test for the POHCs DRE.

The regulated hazardous waste from Minnesota Law Enforcement agencies consists of three main categories that may be and has been disposed of at other approved solid waste or hazardous waste incinerators. The wastes have been evaluated and approved by other similar facilities. Nonhazardous plant-form controlled substances such as Coca, Hashish, Iboga, Khat, Marijuana, Peyote, Salvia Divinorum, Yopo, and Magic Mushrooms may be disposed of at any of the five permitted Municipal Solid Waste (MSW) Combustors in Minnesota. Other confiscated drugs must be disposed of at a

hazardous waste incineration facility ("Managing Law Enforcement-confiscated Drugs," MPCA Factsheet, Sept. 2009). These law enforcement related wastes are not Class 1 hazardous organic compounds based on the thermal stability based incineration ranking, and therefore have much higher destruction efficiencies than other chemicals.

In addition, the law enforcement wastes will be less than 0.1 percent of the feedstream accepted and destroyed at the facility. The nature of the law enforcement wastes coupled with its very small portion of the feedstream and the very high destruction rates means that there is virtually no possibility that the law enforcement waste will negatively affect emissions.

The trial burn was to demonstrate that as a highly controlled hazardous waste facility, this facility is capable of destroying the most difficult to destroy materials. Whereas by contrast, law enforcement wastes are comprised in many cases of materials that are much easier to destroy. As a result, the facility's demonstrated ability to destroy the POHCs means that the law enforcement waste will not overwhelm the control equipment and will be destroyed at higher DRE rates or result in emissions of concern.

**Comment 8-3:** The permit must include sufficient permit conditions to address Compliance Assurance Monitoring (CAM) for Emissions Units (EU) 008. According to the statement of basis, EU 008 is subject to CAM. However, no permit conditions exist in the permit that address CAM requirements. In accordance with 40 CFR §§ 64.6 through 64.9, the permit has to include the following requirements at a minimum:

- i. A description of monitoring (what is measured, how the monitoring indicators are measured such as use of continuous digital measurement or visual observation of an analog gauge for the pressure drop, the monitoring frequency, and the averaging time);
- ii. Definitions of an exceedance or excursion, and consequences (e.g., excursion triggering recordkeeping, corrective actions, and reporting obligations); and
- iii. Quality Assurance/Quality Control schedules and procedures. More information about CAM can be found in the CAM regulations in 40 CFR part 64 and <http://www.epa.gov/ttnemc01/cam.html>.

**Response:** Based on EPA's comment, the draft permit was updated to meet the requirements presented in items i.-iii. above to ensure CAM is appropriately addressed.

**Comment 8-4:** The CAM plan included as Attachment 1 to the TSD appears to be outdated. It makes a reference to the "next performance test to re-establish or change requirements", which was scheduled for October 2009. Presumably, this performance test has already occurred. The CAM plan should be updated to include indicator ranges, operating parameters, etc. that have been established in the most recent performance test. These parameters should also be reflected in the permit conditions for EU 008.

**Response:** The CAM plan was submitted with the reissuance application which was submitted in August 2009. The draft permit contains the correct indicator ranges, operating parameters, etc. that have been established in the most recent performance test, conducted in October 2009. The CAM plan attached to the TSD has been updated to match the conditions in the draft permit.

**Comment 8-5:** [P. A-22, EU 008, Replacement Rotating Kiln, contains a NO<sub>x</sub> limit of less than 190 parts per million. It appears that this condition may be incorrect or incomplete or both. Please verify the correct permit condition for NO<sub>x</sub>.]

**Response:** This is the correct permit condition for the Nitrogen Oxides (NO<sub>x</sub>) limit, and remains unchanged from the current permit. The TSD for the current permit contains the following justification for this limit, listed under section 2.7, page 8:

- [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.

Rough calculations show that 3M could be a major source of NO<sub>x</sub> 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 Nitrogen dioxide (NO<sub>2</sub>). Therefore, a limit of 190 ppm of NO<sub>x</sub> is set to ensure that 3M's NO<sub>x</sub> 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 percent oxygen." For 3M's particular case, the request is reasonable. The purpose of the limit is to remain a minor New Source Review (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.]

**Comment 8-6:** EPA recommends that MPCA consider monitoring for metals, dioxins/furans, and HAPs prior to incinerating the non-3M waste. This would give the community a sense of the background emissions for the area prior to accepting the non-3M waste.

**Response:** The City of Cottage Grove retained Short Elliott Hendrickson, Inc. (SEH) to conduct ambient air monitoring at a location near the 3M Cottage Grove ("3M") facility. SEH conducted the ambient monitoring for the 12-month period from October 2010 through September, 2011. The purpose of the monitoring was to measure annual concentrations of select metals and volatile organic compounds (VOC) near the incinerator operated at the 3M facility. The monitoring was conducted prior to this permit change to determine current conditions and the monitoring is proposed to continue for an additional two years after permit issuance so that any impacts of any changes can be assessed.

SEH staff worked with 3M staff, representatives of the MPCA and the City of Cottage Grove to select a location for the monitoring. The selected site is located northwest of the incinerator stack on 3M property (inside the facility fence). The sampling and analytical methods used were selected to match ambient monitoring methods used by the MPCA at monitoring stations throughout the Twin Cities metropolitan area.

SEH concluded that monitoring showed, for the compounds monitored, the air quality in Cottage Grove meets Minnesota health benchmarks and state ambient air quality standards. Also, the first year's ambient monitoring results are generally comparable with background ambient air concentrations measured throughout the Twin Cities.

The MPCA monitoring experts also reviewed the data and concluded the following: "Overall, based on the report provided by SEH and the City of Cottage Grove, TSP and metals were comparable to concentrations seen throughout the Twin Cities with the exception of total chromium which was measured at a concentration higher than the Twin Cities average."

**Comment 8-7:** EPA recommends that MPCA consider granting the community's request for an Environmental Assessment Worksheet, with all supporting documentation, and possibly a full Environmental Impact Statement, including a cumulative impacts analysis.

**Response:** Minnesota's environmental review statutes and rules do not place this 3M permitting action in a mandatory category for environmental review. The statutes and rules establish criteria for granting discretionary environmental review. Minnesota has a process for determining whether requests for environmental review should be granted.

The MPCA received a request for an EAW and an EIS from the Coalition of Cottage Grove Citizens (CCGC).

EPA recently addressed a closely related point in response to an inquiry from the Coalition of Cottage Grove Citizens (CCGC). In the attached letter dated March 5, 2012, Gary Victorine of EPA responded to a question raised by CCGC that Region V put the cumulative impact study into the MPCA workplan complete the study prior to changes in the permits. The EPA's response is basically that the risk assessment that was conducted in 2004 was a multi-scenario, multi-pathway evaluation and that the assessment showed that routine emissions from the facility do not pose an acute health hazard to the public. The EPA letter went on to say that for the updated risk assessment, which is a requirement in the new Hazardous Waste permit, "in keeping with local concerns over cumulative impacts, the target acceptable risk and hazard levels for the risk assessment may be set lower than those associated with a single source of contamination in part to account for exposure to potential background levels of contamination and from other sources." In other words, the required updated risk assessment may be run in such a way that background concentrations and cumulative impacts are taken into account.

**Comment 8-8:** EPA recommends that MPCA consider the community's request to require 3M to install Continuous Emissions Monitors for lead and total hydrocarbons.

**Response:** Up until about three years ago 3M operated both a THC (Total Hydrocarbons) monitor and a CO monitor in the incinerator stack. 3M found that the THC monitor experienced regular, ongoing technical issues that interfered with obtaining good data. 3M requested that they remove the THC monitor and use only the CO monitor. THC's are products of incomplete combustion which either originate in the fuel or are formed during combustion. CO is another product of incomplete combustion. Correlations can be made which relate CO concentration to THC concentration, both of which increase as combustion efficiency decreases and both are indicators of incomplete combustion. The MACT standard has taken this into account, and requires use of whichever monitor works best with the particular system in use. Since MACT only requires one of the monitors be operated; CO and THC CEMS are redundant; and CO and THC correlate with each other, MPCA allowed 3M to discontinue operation of the THC monitor. 3M continues to operate the CO monitor. Given past experience with the THC monitor on this system, requiring re-installation would not yield accurate, useful data.

Regarding a lead monitor, generally materials containing higher concentrations of lead are not accepted for destruction in the incinerator. 3M has no incentive to burn lead in the incinerator and the bulk shipments of non-3M waste allowed by the new permit will be tested for lead to make sure that the waste will not have any more lead than the materials they are currently burning.

The replacement MACT standards that went into effect October 14, 2008, have limited the maximum yearly emissions of lead to 249 lb/yr. The average lead emissions from the incinerator were approximately 127 lbs/year for 2001 to 2007 and for 2008 to 2010 annual lead emissions averaged 29 lbs/year. Lead emissions are well below the limit and the trend has been lower lead emissions.

The new NAAQS for lead is 0.15 µg/m<sup>3</sup>. The MPCA ran a conservative screening model using the RASS Spreadsheet, using the maximum potential emissions and a conservative distance to the closest property boundary. It predicts the lead concentrations will be less than 1/40<sup>th</sup> of the new standard, measured near the boundary of the facility.

Also, EPA already addressed a request concerning the possible installation of emissions monitors for lead and TCH and the accuracy of actual emissions. In question number 3 in the attached letter from Gary Victorine of EPA, CCGC questioned the accuracy of the relation of analysis through the Waste Analysis Plan (WAP) and actual emissions and requested that emissions monitors be required for lead and THC. Over a period of several months in 2011 and 2012 EPA and MPCA did extensive work on the WAP making it much more robust. The EPA letter summarizes the changes made that should ensure that sampling and analysis conducted under the new WAP will provide a more accurate estimate of actual emissions further negating the need for monitors in the stack.

The CCGC also specifically asks about CO exceedences caused by "hot drums" and asks if these should have triggered installation of a THC monitor on the stack in question number 8 in the attached letter. EPA replies to question number 8 that there has been a reduction in both the number of CO exceedences and in those caused by hot drums due to corrective actions taken by 3M. EPA does not indicate that a THC monitor is warranted.

In summary, in coordination with EPA, the MPCA has done extensive work over the past three years to address the very issues presented in your letter of April 23, 2012. Throughout the course of this work, EPA gave every indication that MPCA's activities were satisfactory to address the issues. We would appreciate affirmation that our work resolves any questions you may have had.

**EPA Response:** The comments 8-1 through 8-8 and responses were submitted by EPA, and responded to by MPCA. Based on the MPCA response to EPA comments, Genevieve Damico of EPA sent the following letter dated May 4, 2012:

Dear Mr. Pak:

Thank you for the opportunity to review your response to our comments on the draft/proposed Title V permit renewal and major amendment for 3M's Corporate Incinerator, located in Cottage Grove, Minnesota (permit number 16300025-002). As you know, the U.S. Environmental Protection Agency provided comments and recommendations on the draft/proposed permit in an April 23, 2012 letter to the Minnesota Pollution Control Agency. We have reviewed your response to our comments and have no further concerns. We also would like to emphasize that items 6-8 from the April 23, 2012 letter were put forth purely as recommendations and should not be construed as being regulatory requirements. We appreciate the opportunity to work with your staff to address our concerns.

Please feel free to contact me or Jennifer Darrow, of my staff, at 312-866-6315 if you have any further questions.