

AIR EMISSION PERMIT NO. 16300080-001

IS ISSUED TO

3M Company

3M - Cottage Grove - Tape Manufacturing
10746 Chemolite Road Building 102
Cottage Grove, Washington County, MN 55016-4600

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
Total Facility Operating Permit

Application Date
Update submitted 9/12/2002

This permit authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Pt 70/Major for NSR

Issue Date: March 22, 2005

Expiration: March 22, 2010
All Title I Conditions do not expire.

Richard J. Sandberg, Manager
Air Quality Permits Section
Industrial Division

for Sheryl A. Corrigan
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 entire 3M Cottage Grove facility is considered a single stationary source for purposes of Part 70 permitting. For clarity and convenience, it has been agreed to issue separate Part 70 permits to various operating units. Building 102 contains the Engineered Adhesives Division and the Tape Process Technology Center. The equipment is used for manufacture of pressure sensitive tape and labels. Emitting equipment includes coaters, ovens, oxidizers, mixers, churns, weigh stations, bead applicator, and wash tank.

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/22/05

Facility Name: 3M - Cottage Grove - Tape Manufacturing
 Permit Number: 16300080 - 001

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

Subject Item:	Total Facility
What to do	Why to do it
OPERATIONAL REQUIREMENTS	hdr
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Required practices: Existing HVAC equipment that uses HCFC-123 shall be serviced only by EPA certified technicians. Emissions of HCFC-123 to the atmosphere shall be kept at the lowest achievable minimum.	40 CFR Section 82.156 Ozone-depleting substances
Required warning statements. Unless otherwise exempted by this subpart, each container or product identified in 40 CFR Section 82.102 (a) or (b) shall bear the following warning statement, meeting the requirements of this subpart for placement and form: WARNING: Contains [or Manufactured with, if applicable] [insert name of substance], a substance which harms public health and environment by destroying ozone in the upper atmosphere.	40 CFR Section 82.106(a)
Parts 7009.1000 to 7009.1110 apply to any owner or operator of any emission facility or stationary source having allowable emissions of any single air pollutant of 250 or more tons per year located within or having air pollutant emissions affecting any area within Minnesota for which an air pollution alert, air pollution warning, air pollution emergency, or air pollution significant harm episode has been declared by the commissioner.	Minn. R. 7009.1000-1110 Air Pollution Episodes
PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017

TABLE A: LIMITS AND OTHER REQUIREMENTS

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<p>Performance Test Notifications and Submittals:</p> <p>Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.</p> <p>Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test</p> <p>The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.</p>	<p>Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2</p>
<p>Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.</p>	<p>Minn. R. 7017.2025</p>
<p>MONITORING REQUIREMENTS</p>	<p>hdr</p>
<p>Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, 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.</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>RECORDKEEPING</p>	<p>hdr</p>
<p>Record keeping: 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).</p>	<p>Minn. R. 7007.0800, subp. 5(C)</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 5(B)</p>
<p>REPORTING/SUBMITTALS</p>	<p>hdr</p>
<p>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 owner or operator 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.</p> <p>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.</p>	<p>Minn. R. 7019.1000, subp. 3</p>
<p>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 owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.</p> <p>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.</p>	<p>Minn. R. 7019.1000, subp. 2</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 1</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

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<p>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:</p> <ol style="list-style-type: none"> 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. 	<p>Minn. R. 7019.1000, subp. 1</p>
<p>Contact Minnesota Department of Health and the asbestos team at the MPCA prior to any renovation or demolition projects at the facility that may involve asbestos containing substances.</p>	<p>40 CFR Section 61.145 National Emission Standard, Subpart M, Demolition and Renovation of Asbestos Containing Structures</p>
<p>Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.</p>	<p>Minn. R. 7007.1150 through Minn. R. 7007.1500</p>
<p>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).</p>	<p>Minn. R. 7007.1400, subp. 1(H)</p>
<p>Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.</p>	<p>Minn. R. 7019.3000 through Minn. R. 7019.3100</p>
<p>Emission Fees: due 60 days after receipt of an MPCA bill.</p>	<p>Minn. R. 7002.0005 through Minn. R. 7002.0095</p>
<p>NESHAP GENERAL REQUIREMENTS</p>	<p>hdr</p>
<p>The appropriate requirements of 40 CFR 63, subp. A, apply to the facility at the time the facility becomes subject to the requirements of 40 CFR 63, subp. JJJJ.</p>	<p>40 CFR Section 63.3340</p>
<p>Prohibited activities.</p> <p>(1) No owner or operator subject to the provisions of this part must operate any affected source in violation of the requirements of this part. Affected sources subject to and in compliance with either an extension of compliance or an exemption from compliance not in violation of the requirements of this part. An extension of compliance can be granted by the Administrator under this part; by a State with an approved permit program; or by the President under section 112(i)(4) of the Act.</p> <p>(2) No owner or operator subject to the provisions of this part shall fail to keep records, notify, report, or revise reports as required under this part.</p>	<p>40 CFR Section 63.4(a) National Emission Standards for Hazardous Air Pollutants, Subpart A, General Provisions</p>
<p>Circumvention. No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to-</p> <p>(1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere;</p> <p>(2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions; and</p>	<p>40 CFR Section 63.4(b)</p>
<p>Fragmentation. Fragmentation after November 15, 1990 which divides ownership of an operation, within the same facility among various owners where there is no real change in control, will not affect applicability. The owner and operator must not use fragmentation or phasing of reconstruction activities (i.e., intentionally dividing reconstruction into multiple parts for purposes of avoiding new source requirements) to avoid becoming subject to new source requirements.</p>	<p>40 CFR Section 63.4(c)</p>
<p>Initial notifications.</p> <p>(1)(i) The requirements of this paragraph apply to the owner or operator of an affected source when such source becomes subject to a relevant standard.</p> <p>2) The owner or operator of an affected source that has an initial startup before the effective date of a relevant standard under this part shall notify the Administrator in writing that the source is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after the effective date of the relevant standard (or within 120 calendar days after the source becomes subject to the relevant standard), shall provide the following information:</p>	<p>40 CFR Section 63.9(b)</p>

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<p>(i) The name and address of the owner or operator;</p> <p>(ii) The address (i.e., physical location) of the affected source;</p> <p>(iii) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;</p> <p>(iv) A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and</p> <p>(v) A statement of whether the affected source is a major source or an area source.</p>	<p>40 CFR Section 63.9(b) CONTINUED</p>
<p>(1) The requirements of paragraphs (h)(2) through (h)(4) of this section apply when the initial notification requirements apply to the source under the applicable standard.</p>	<p>40 CFR Section 63.9(h)</p>
<p>(3) After a title V permit has been issued to the owner or operator of an affected source, the owner or operator of such source shall comply with all requirements for compliance status reports contained in the source's title V permit, including reports required under this part. After a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit the notification of compliance status to the appropriate permitting authority following completion of the relevant compliance demonstration activity specified in the relevant standard.</p>	<p>40 CFR Section 63.9(h) CONTINUED</p>
<p>Each time a notification of compliance status is required under this part, the owner or operator of such source shall submit to the Administrator a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list (per 40 CFR Section 63.9(h)(1) and (2):</p>	<p>40 CFR Section 63.9(h) CONTINUED</p>
<p>(A) The methods that were used to determine compliance;</p> <p>(B) The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;</p> <p>(C) The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;</p> <p>(D) The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard;</p>	<p>40 CFR Section 63.9(h) CONTINUED</p>
<p>(E) If the relevant standard applies to both major and area sources, an analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification);</p> <p>(F) A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method); and</p> <p>(G) A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements.</p>	<p>40 CFR Section 63.9(h) CONTINUED</p>
<p>(ii) The notification must be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration activity specified in the relevant standard (unless a different reporting period is specified in the standard, in which case the letter must be sent before the close of business on the day the report of the relevant testing or monitoring results is required to be delivered or postmarked). For example, the notification shall be sent before close of business on the 60th (or other required) day following completion of the initial performance test and again before the close of business on the 60th (or other required) day following the completion of any subsequent required performance test.</p>	<p>40 CFR Section 63.9(h) CONTINUED</p>
<p>If no performance test is required but opacity or visible emission observations are required to demonstrate compliance with an opacity or visible emission standard under this part, the notification of compliance status shall be sent before close of business on the 30th day following the completion of opacity or visible emission observations. Notifications may be combined as long as the due date requirement for each notification is met.</p>	<p>40 CFR Section 63.9(h) CONTINUED</p>

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<p>(1) The owner or operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.</p> <p>(2) The owner or operator of an affected source subject to the provisions of this part shall maintain relevant records for such source of-</p>	<p>40 CFR Section 63.10(b)</p>
<p>(i) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment);</p> <p>(ii) The occurrence and duration of each malfunction of the required air pollution control and monitoring equipment;</p> <p>(iii) All required maintenance performed on the air pollution control and monitoring equipment;</p> <p>(iv) Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see 40 CFR Section 63.6(e)(3));</p>	<p>40 CFR Section 63.10(b) CONTINUED</p>
<p>(v) All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see 40 CFR Section 63.6(e)(3)) when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events).</p>	<p>40 CFR Section 63.10(b) CONTINUED</p>
<p>40 CFR pt. 63, subp. JJJJ NESHAP CONDITIONS</p>	<p>hdr</p>
<p>The provisions of this subpart apply to each new and existing facility that is a major source of HAP, as defined in 40 CFR Section 63.2, at which web coating lines are operated.</p>	<p>40 CFR Section 63.3290 National Emission Standards for Hazardous Air Pollutants, Subpart JJJJ, Paper and Other Web Coating</p>
<p>The affected source subject to this subpart is the collection of all web coating lines at your facility. This includes web coating lines engaged in the coating of metal webs that are used in flexible packaging, and web coating lines engaged in the coating of fabric substrates for use in pressure sensitive tape and abrasive materials.</p>	<p>40 CFR Section 63.3300</p>
<p>If you own or operate an existing affected source subject to the provisions of this subpart, you must comply by the compliance date. The compliance date for existing affected sources in this subpart is December 5, 2005. You must complete any performance test required in 40 CFR Section 63.3360 within the time limits specified in 40 CFR Section 63.7(a)(2).</p>	<p>40 CFR Section 63.3330(a)</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: 3M - Cottage Grove - Tape Manufacturing

Permit Number: 16300080 - 001

Subject Item: GP 001 Chemical Churns

- Associated Items:**
- EU 001 Adhesive Churn 1
 - EU 002 Adhesive Churn 2
 - EU 003 Adhesive Churn 3
 - EU 004 Adhesive Churn 4
 - SV 002 Vent for Churn 1
 - SV 003 Vent for Churn 2
 - SV 004 Vent for Churn 3
 - SV 005 Vent for Churn 4

What to do	Why to do it
Process Throughput: less than or equal to 388267 gallons/month using Other type of calculation method, namely less than or equal to 89600 gallons per week for all churns.	Title I Condition: Limit to avoid classification as a major modification under 40 CFR 52.21 and Minn. R. 7007.3000
By the 20th of each month, calculate and record weekly throughput to all churns during the previous calendar month.	Title I Condition: Monitoring for limit to avoid classification as a major modification under 40 CFR 52.21 and Minn. R. 7007.3000

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: 3M - Cottage Grove - Tape Manufacturing

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Subject Item: GP 002 Chemical Mixers

- Associated Items:** EU 005 Mixer 1
 EU 006 Mixer 2
 EU 007 Mixer 3
 EU 008 Mixer 4
 SV 001 Vent for Mixer 1 2 & 3
 SV 023 Vent for Mixer 4

What to do	Why to do it
VOC Usage: less than or equal to 1300000 lbs/year using 12-month Rolling Sum of VOC mixed total for all mixers	Title I Condition: Limit to avoid classification as a major modification under 40 CFR 52.21 and Minn. R. 7007.3000
By the 20th of each month, calculate and record the total VOC used for all mixers for the previous calendar month, and the 12-month rolling sum.	Title I Condition: Monitoring for limit to avoid classification as a major modification under 40 CFR 52.21 and Minn. R. 7007.3000
Material Content: VOC contents in materials shall be determined by the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the MSDS, the highest number in the range shall be used in all compliance calculations. Other alternative methods approved by the MPCA may be used to determine the VOC contents. The Commissioner reserves the right to require the Permittee to determine the VOC contents of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the MSDS.	Minn. R. 7007.0800, subp. 4 and 5

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Facility Name: 3M - Cottage Grove - Tape Manufacturing

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Subject Item: GP 003 Storage Silos

Associated Items: SV 007 Vent for Silo 1

SV 008 Vent for Silo 2

TK 001 Silo 1

TK 002 Silo 2

What to do	Why to do it
Process Throughput: less than or equal to 182000 gallons/month using Other type of calculation method, namely less than or equal to 42000 gallons per week for both silos.	Title I Condition: Limit to avoid classification as a major modification under 40 CFR 52.21 and Minn. R. 7007.3000
By the 20th of each month, calculate and record weekly throughput for both silos during the previous calendar month.	Title I Condition: Monitoring for limit to avoid classification as a major modification under 40 CFR 52.21 and Minn. R. 7007.3000

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Facility Name: 3M - Cottage Grove - Tape Manufacturing
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Subject Item: GP 004 Makers 11 and 14 Exhaust Stacks

- Associated Items:** SV 009 Maker 11 Oxidizer Exhaust
 SV 010 Maker 14 Oxidizer Exhaust
 SV 011 Maker 11 Coater Exhaust
 SV 012 Maker 11 Zone 1 Exhaust
 SV 013 Maker 11 Zone 2 Exhaust
 SV 014 Maker 11 Zone 3 Exhaust
 SV 015 Maker 11 Zone 4 Exhaust
 SV 016 Maker 11 Zone 5 Exhaust
 SV 017 Maker 14 Coater Exhaust
 SV 018 Maker 14 Zone 1 Exhaust
 SV 019 Maker 14 Zone 2 Exhaust
 SV 020 Maker 14 Zone 3 Exhaust
 SV 021 Maker 14 Zone 4 Exhaust

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas at each stack unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735.	Minn. R. 7011.0610, subp. 1(a)(1)
Opacity: less than or equal to 20 percent opacity at each stack except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1(a)(2)

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: 3M - Cottage Grove - Tape Manufacturing

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Subject Item: GP 005 Makers 11 and 14 Catalytic Oxidizers

Associated Items: CE 001 Catalytic Afterburner w/Heat Exchanger

CE 002 Catalytic Afterburner w/Heat Exchanger

What to do	Why to do it
The oxidizers are voluntary and are not required to be operated. When they are operated and credit for emissions inventory and fee purposes is sought, the following monitoring, and recordkeeping requirements apply.	Minn. R. 7007.0800
Maintain records of the operation of the oxidizers in order that actual emissions for any period may be determined. This shall include records of which batches from which makers were routed to the oxidizers and sufficient detail on those batches to determine input solvent levels to the oxidizers. Use the most relevant destruction efficiency (manufacturer's specifications, that determined in most recent performance test, or that from most recent catalyst test) in calculating emissions.	Minn. R. 7007.0800, subp. 4 and 5
Temperature: greater than or equal to 600 degrees F using Other (Absolute Minimum) at the inlet until a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the minimum temperature recorded during the most recent MPCA approved performance test where VOC emissions/destruction efficiency was demonstrated. If the temperature drops below the minimum temperature limit, the VOC used during that time shall be considered uncontrolled until the minimum temperature limit is once again achieved.	Minn. R. 7007.0800, subp. 2 and 14
Sample Analysis: due before end of each calendar 24 months following Permit Issuance. Send a representative sample of the catalyst to a laboratory to test the catalyst's destruction efficiency. If test results show a destruction efficiency less than the manufacturer's specifications, follow the corrective actions contained in the Operation and Maintenance Plan.	Minn. R. 7007.0800, subp. 4, 5 and 14
Maintain a continuous hard copy readout or computer disk file of the inlet and outlet temperatures.	Minn. R. 7007.0800, subp. 4 and 5
Daily Monitoring: Physically verify the operation of the temperature recording device at least once each operating day to verify that it is working and recording properly and maintain a written record of the daily verifications.	Minn. R. 7007.0800, subp. 4 and 5
Monitoring Equipment: Install and maintain thermocouples for measuring the temperatures. The monitoring equipment must be installed, in use, and properly maintained whenever the monitored control equipment is operated and considered in actual emissions calculations for inventory and fee purposes.	Minn. R. 7007.0800, subp. 4
Maintain and operate a thermocouple monitoring device that continuously indicates and records both the inlet and outlet temperatures of the catalytic oxidizer. The monitoring device shall have a margin of error less than the greater of +/- 0.75 percent of the temperature being measured or +/- 2.5 degrees Celsius.	Minn. R. 7007.0800, subp. 4 and 5
Monthly Monitoring: At least once each month during normal operation, record the temperature rise across the catalyst (outlet temp. - inlet temp.) while the process is running. If it is determined that the catalyst reactivity has been impaired, by comparison of the observed temperature rise to the past temperature rise records, follow the corrective actions in the Operation and Maintenance Plan. Maintain written records of the monitoring and any corrective actions taken.	Minn. R. 7007.0800, subp. 4, 5 and 14
Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer specifications, inspect the control equipment internal and external system components, including but not limited to the refractory, heat exchanger, and electrical systems. Maintain a written record of the inspection and any corrective actions taken resulting from the inspection.	Minn. R. 7007.0800, subp. 4, 5 and 14
Annual Calibration: Calibrate the temperature monitor at least annually and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 4, 5 and 14
Corrective Actions: If the temperature is below the minimum specified by this permit (or most recent performance test), or if the catalytic oxidizer or any of its components are found during the inspections to need repair, take corrective action as soon as possible. Corrective actions shall return the temperature to at least the permitted (or previously tested) minimum and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the catalytic oxidizer. Keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5 and 14
Operate and maintain the thermal oxidizer in accordance with the Operation and Maintenance (O & M) Plan. Keep copies of the O & M Plan available on site for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/22/05

Facility Name: 3M - Cottage Grove - Tape Manufacturing

Permit Number: 16300080 - 001

Subject Item: GP 006 Coating Lines Subject to NSPS, 40 CFR 60, subp. RR**Associated Items:** EU 028 ACE-1 Coating Line

EU 029 DLX-2 Coating Line

EU 031 IP-1 Coating Line

What to do	Why to do it
VOC Usage: less than or equal to 0.20 kilograms/kilograms using 30-day Block Average . (Each coating line is the affected facility and the kg VOC/kg of coating solids applied is calculated on a weighted average basis for one calendar month.)	40 CFR Section 60.442, Minn. R. 7011.2560
By the 20th of each month, record the total VOC used on each line and calculate the weighted average kg VOC/kg of coating solids applied for the previous calendar month.	Minn. R. 7007.0800, subp. 4 and 5

TABLE B: SUBMITTALS

03/22/05

Facility Name: 3M - Cottage Grove - Tape Manufacturing
Permit Number: 16300080 - 001

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

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

Send any application for a permit or permit amendment to:

Permit Technical Advisor
Permit Section
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

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

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

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

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

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

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

03/22/05

Facility Name: 3M - Cottage Grove - Tape Manufacturing

Permit Number: 16300080 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Notification	due 365 days before Notify -- That is: Submit an initial notification, as required by 40 CFR Section 63.9(b) by December 5, 2004. ((1) Initial notification for existing affected sources must be submitted no later than 1 year before the compliance date specified in 40 CFR Section 63.3330(a).)	Total Facility

TABLE B: RECURRENT SUBMITTALS

03/22/05

Facility Name: 3M - Cottage Grove - Tape Manufacturing

Permit Number: 16300080 - 001

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 16300080-001

This Technical Support Document (TSD) is for all the interested parties of the permit. The purpose of this document is to set forth the legal and factual basis for the permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

1.1. Applicant and Stationary Source Location

Owner and Operator Address and Phone Number (list both if different)	Facility Address SIC Code: 2672
Ms. Kelly Wrich 3M Environmental Technology and Safety Services P.O. Box 33331 St. Paul, MN 55133-3331 (651) 778-5036	Highway 61 & County Rd 19, Building 102 Cottage Grove Washington County

1.2. Description of the Facility

Building 102 contains the Engineered Adhesives Division and the Tape Process Technology Center. The Engineered Adhesives Division produces pressure sensitive adhesive tape. The Tape Process Technology Center consists of several pilot-plant scale processing lines used to develop adhesive tape products. Since these two operations are housed in what is essentially one building, 3M has chosen to submit a single application for a permit to cover both operations. For purposes of federal operating permits, the entire Cottage Grove facility is considered a single stationary source (see below). The primary pollutants from the facility are Volatile Organic Compounds (VOC), which are a component of the solvent used in the adhesive. Emissions are also generated from the combustion of natural gas in the dryer ovens, and particulate matter is emitted from the catalytic oxidizers.

1.3. Description of Any Changes Allowed With This Permit Issuance

This permit authorizes the use of liquefied petroleum gas (propane) in addition to natural gas as fuel in the ovens and catalytic oxidizers.

1.4. Description of Previous Permits Issued to This Facility

Permit Number and Issuance Date	Action Authorized
23AS-89-I/O-2/3, 1989	Churn and storage silo installation
23AS-92-P-1, 1992	DLX-2 Coating Line (NSPS Subpart RR)
23AS-93-P-1, 1993	IP-1 Coating Line (NSPS Subpart RR)
23AS-90-I/O-1, August 14,1990	Installation of the two catalytic oxidizers
23AS-98-I/O-1, 1998	ACE-1 Coating Line (NSPS Subpart RR), Fiber mix tank installation

1.5. Facility Emissions

Table 1. Total Facility Potential to Emit Summary

ID #	SV #	Subject Item Description	PM tpy	PM10 tpy	SO2 tpy	NOx tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
GP001	002, 003, 004, 005	Churns 1-4						2.93	2.93	2.93
GP002	001, 023	Mixers 1-4						39.00	39.00	39.00
EU009	009	Maker 11 Oxidizer	2.29	2.29	0.06	20.92	8.06	0.53		
EU010	011*, 009	Maker 11 Coater						4,461	2,230	2,230
EU011	012*, 013*, 014*, 015*, 016*, 009	Maker 11 Oven	0.43	0.43	0.03	12.28	4.73	0.31		
EU012	010	Maker 14 Oxidizer	2.29	2.29	0.06	20.92	8.06	0.53		
EU013	017*, 010	Maker 14 Coater						5,580	2,790	2,790
EU014	018*, 019*, 020*, 021*,	Maker 14 Oven	0.22	0.22	0.02	6.37	2.45	0.16		

	010									
EU015	006	Fiber Mix Tank						38.14	38.14	38.14
EU017	022	Wash Tank						3.19	3.19	3.19
GP003	007, 008	Silos 1-2						2.89	0.89	0.89
FS001		Cleanup Solvent						30.15	29.35	29.35

* Bypass stacks

	PM tpy	PM10 tpy	SO2 tpy	NOx tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Limited Potential Emissions for this permit	5.23	5.23	0.17	60.48	23.30	10,159	5,134	5,134
Total Actual Emissions for this permit	1.10	0.64	0.03	5.95	1.45	248	69.6	69.6

Actual Emissions were supplied by the permittee and are from the permit application. Recent annual emission inventory reports generally show actual emissions less than those reported here.

Table 2. Facility (TF) and Permit Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD (list pollutant)	VOC		PM, PM10, SO2, NOx, CO
NAAR (list pollutant)	NA	NA	NA
Part 70 Permit Program (list pollutant)	HAP		

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

2. Regulatory and/or Statutory Basis

Major Source Status

There are several definitions of “major source” to consider under federal regulations. These are the definitions for the Hazardous Air Pollutants (HAPs) regulations under Section 112 of the Clean Air Act (implemented through the regulations at 40 CFR pt. 63), the definitions for federal New Source Review found at 40 CFR § 51.165 and § 52.21, and the definition of major source for the Title V permit program implemented through 40 CFR pt. 70.

Hazardous Air Pollutants, Section 112 of the Clean Air Act and 40 CFR Part 63

For this program, all facilities under common ownership or control and on contiguous or adjacent properties must be grouped together and considered a single stationary source. This single source is considered a major source if it has the potential-to-emit (PTE) 10 tons per year or more of any HAP, or 25 tons per year or more of all HAP added together. The entire Cottage Grove facility constitutes a contiguous area under the ownership and control of 3M and exceeds the thresholds, so it is a major source of HAP. Building 102 is considered a part of a major source for HAPs.

Title V/Part 70 Operating Permits Program, 40 CFR Part 70

A major source for this program is one which has the PTE 100 tons per year or more of any air pollutant, or which is a major source under the HAP program. The entire Cottage Grove facility is considered a major source under Part 70 due to its major source status under Part 63.

New Source Review - Prevention of Significant Deterioration, 40 CFR Section 52.21

Prevention of Significant Deterioration (PSD) uses two different thresholds for major source status, 100 or 250 tons per year, depending on the type of industry. The underlying definition of stationary source for PSD requires grouping all facilities under common ownership or control which are on contiguous or adjacent property **and which also have the same first two-digit SIC Code**. Facilities with different SIC Codes may sometimes be aggregated into a single source if one is considered a support facility to the other(s). At Cottage Grove, Tape Manufacturing – Building 102 is classified in SIC code 2672. None of the individual facilities qualifies as a support facility, since no facility provides 50 % or more of its products or services to any other facility at this location. The Corporate Incinerator incinerates wastes from 3M facilities nationwide. The utilities plant is a wastewater treatment plant that receives some wastewater from all facilities at this location.

SIC Codes currently assigned to the Cottage Grove operations are:

<u>Name</u>	<u>MPCA File No.</u>	<u>Delta ID</u>	<u>SIC</u>
<i>Tape Manufacturing</i>	<i>23AE</i>	<i>16300080</i>	<i>2672</i>
Abrasive Systems Division	23AX	16300017	3291
Automotive - Building 17	23AH	16300065	2297
Corporate Incinerator	23AI	16300025	4953
Film - Building 17	23AF	16300023	3081
Industrial Specialty, Bldg 74, 101 & 110	23AS	16300002	3229
Sensitizer Bldg 111	23AK	16300071	3861
SMD Chemicals	23AC	16300022	2891
TCM Division	23AT	16300059	3993
Utilities (wastewater)	23AB	16300015	4952

New Source Review-Nonattainment New Source Review, 40 CFR Part 51 Appendix S

New Source Review for Nonattainment Areas uses a threshold of 100 tons per year, but this applies only to pollutants for which the area is classified as nonattainment. At this time, the area is classified attainment for all criteria pollutants.

Summary of Major Source Status and Approach to Permitting

The Minnesota Pollution Control Agency (MPCA) and 3M staff have agreed that separate permits will be issued for each of the different operations at Cottage Grove, but each permit will be a Part 70 permit, and the entire Cottage Grove facility is considered a single major source for HAP.

New Source Performance Standards (NSPS)

There are three coating lines that are subject to the Subpart RR, Pressure Sensitive Tape and Label Surface Coating Operations, ACE-1, DLX-2, and IP-1, all of which are considered insignificant activities for emission purposes. The two main coating lines are not subject to these standards, as they were installed in 1958, which is prior to the applicability date.

The two storage silos were subject to Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, at the time they were installed. However, since the silos are between 50 cubic meters and 75 cubic meters in volume, the only requirement was to maintain records of the tank volumes on site. This Subpart has since been amended, and the storage silos are no longer subject to this standard.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a major source of HAPs, and is subject to Subpart JJJJ, Paper and Other Web Coating. The first requirement of the NESHAP is to submit a notification, due December 5, 2004, listing which compliance strategy the facility will use to meet the NESHAP standards.

The facility is also subject to 40 CFR pt. 61, Subpart M, National Emission Standard for Asbestos, for Demolition and Renovation of Asbestos containing structures. The facility shall contact the Minnesota Department of Health and the asbestos team at the Minnesota Pollution Control Agency prior to any projects involving renovation or demolition of any asbestos containing materials.

Minnesota State Rules

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

- Minn. R. 7011.0610 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
- Minn. R. 7011.2560 Standards of performance for pressure sensitive tape and label surface coating operations (incorporates NSPS by reference)

Table 3

Regulatory Overview of Facility

Subject Item	Applicable Regulations	Comments:
FC	40 CFR 82	Use of ozone depleting substances, facility current uses HCFC-123, a Class II material, in its air conditioners.
	40 CFR 61, Subpart M	National Emission Standard for Asbestos, for Renovation and Demolition of asbestos containing structures
	40 CFR 63, Subpart JJJJ	National Emission Standard for Hazardous Air Pollutants, Paper and Other Web Coating Facility is required to submit a notification by December 5, 2004, declaring which compliance method facility will use to meet standards.
GP 001 Chemical Churns	Title I Condition, 40 CFR 52.21, Minn. R. 7007.3000, Permit #23AS-89-I/O-2/3	Throughput limit of 89,600 gallons per week for all churns. Taken to avoid applicability of PSD to VOC emissions.
	Record Keeping	By the 20 th of each month, calculate and record weekly throughput to all churns during the last calendar month.
GP 002 Chemical Mixers	Title I Condition, 40 CFR 52.21, Minn. R. 7007.3000	Throughput limit of 1,300,000 lbs VOC per year for all mixers. Taken to avoid applicability of PSD to VOC emissions.
	Record Keeping	By the 20 th of each month, calculate and record weekly throughput to all churns during the last calendar month.
GP 003 Storage Silos	Title I Condition, 40 CFR 52.21, Minn. R. 7007.3000, Permit #23AS-89-I/O-2/3	Throughput limit of 42,000 gallons per week for all tanks. Taken to avoid applicability of PSD to VOC emissions.
	Record Keeping	By the 20 th of each month, calculate and record weekly throughput to all churns during the last calendar month.
GP 004 Maker Oxidizers	Minn. R. 7011.0610	Limits emission of PM per 7011.0700 to 7011.0735

EU009, EU012		
	Minn. R. 7011.0610	Opacity not greater than 20%, except a maximum of 60% is permissible 4 minutes per hour and 40% is permissible for another 4 minutes per hour
	Periodic Monitoring	Maintain records of operation of the oxidizers and record inlet and outlet temperatures in order to claim reductions for actual emissions calculations.
GP 005 Maker Ovens EU011, EU014	Minn. R. 7011.0610	Limits emission of PM per 7011.0700 to 7011.0735
	Minn. R. 7011.0610	Opacity not greater than 20%, except a maximum of 60% is permissible 4 minutes per hour and 40% is permissible for another 4 minutes per hour
	Periodic Monitoring	No periodic monitoring is deemed necessary since it is highly unlikely the limits will be exceeded.
GP 006 Coating Lines ACE-1, DLX-2, and IP-1	40 CFR 60, Subpart RR, Permits #16300002-026 (23AS-98-I/O-1), #16300002-027 (23AS-00- I/O-1), 23AS-93-P-1	By the 20 th of each month, record VOC use by weight for the previous calendar month and calculate the 12-month rolling sum of VOC usage, for each affected source.

3. Technical Information

3.1 Calculations of Potential to Emit and Emissions Increase Analysis

Attachment 1 to this TSD contains spreadsheet calculations that summarize the PTE of the 3M Cottage Grove – Building 102 facility.

The potential emissions from the four churns, GP001, were calculated using the U.S. Environmental Protection Agency (EPA) TANKS, v4.0 software. Potential emissions are based on the maximum throughput capacity of the vessels, while limited potential emissions are based on the throughput limit of 89,600 gallons per week for the group.

The mixer emissions, GP002, are based on an engineering estimate of the VOC loss and the maximum throughput capacity of the equipment. Limited potential emissions are based on the limit of 1,300,000 lbs VOC/yr throughput for all four mixers.

The emissions from the catalytic oxidizers, EU009 and EU012, are calculated in two parts. The combustion emissions are based on the firing capacity of the oxidizers and the emission factors found in AP-42, Sections 1.4 and 1.5, for natural gas and propane combustion. The particulate emissions also include a catalyst loss component, based on manufacturer information.

The emissions from the coating operations, EU010 and EU013, were calculated by mass balance and assuming that all of the VOC and HAP are emitted.

The emissions from the ovens, EU011 and EU014, are based on the emission factors in AP-42, Sections 1.4 and 1.5, for natural gas and propane combustion, and the maximum firing capacity of the two ovens.

Emissions from the fiber mix tank, EU015, are calculated using the EPA TANKS, v4.0 software, and the maximum throughput of the equipment.

The maximum potential emissions from the wash tank, EU017, are based on the emission factors in AP-42, Section 4.6, and the exposed surface area of 9.11 ft².

The maximum potential emissions from the storage silos, GP003, were calculated using the EPA TANKS, v4.0 software and the maximum throughput through the equipment. Limited potential emissions are based on the throughput limit of 42,000 gallons per week for both silos.

Clean-up solvent use emissions are based on conservative assumptions for solvent use and VOC content.

Most calculations conservatively assume all the VOC are HAP.

NSR Applicability of Non-Permitted Modifications

Modification	Year	PM	PM10	SO2	NOx	VOC	CO
Thresholds	tpy	25	15	40	40	40	100
Added wash tank	1988					3.19	
Replaced Maker 11 ovens with like kind units	1990	0.43	0.43	0.03	5.63	0.31	4.73

3.2 Periodic Monitoring

Emission Unit or Group	Requirement	Additional Monitoring	Discussion
GP 001 Churns	VOC < 40 tpy, to avoid PSD	By 20 th of each month, calculate and record weekly throughput to all churns during last calendar month.	Record keeping required to verify emissions increases are below PSD threshold.
GP 002 Mixers	VOC ,< 40 tpy, to avoid PSD	By 20 th of each month, calculate and record weekly throughput to all mixers during last calendar month.	Record keeping required to verify emissions increases are below PSD threshold.
GP 003 Silos	VOC ,< 40 tpy, to avoid PSD	By 20 th of each month, calculate and record weekly throughput to both tanks during last calendar month.	Record keeping required to verify emissions increases are below PSD threshold.
GP 004 Catalytic Oxidizers EU009, EU012	Data collection for actual emissions calculations	Maintain records of operation of oxidizers, and monitor inlet and outlet temperatures.	Operation of oxidizers is voluntary. Record keeping required to claim reductions in calculating actual emissions.
GP 006 Coating Lines ACE-1, DLX-2, and IP-1	40 CFR 60, Subpart RR	By the 20 th of each month, record VOC use by weight for the previous calendar month and calculate the 12-month rolling sum of VOC usage, for each affected source.	Record keeping for NSPS compliance.

3.2 Insignificant Activities

The Permittee listed several insignificant activities in the permit application and supplemental submittals. The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. Using the criteria outlined earlier in this TSD, the following table documents the justification why no additional periodic monitoring is necessary for the current insignificant activities, and likely future ones, that might be located at this site. See Attachment 3 of this TSD for PTE information for the insignificant activities.

Table 4. Insignificant Activities

Insignificant Activity	General Applicable Emission limit	Discussion
Fuel use in furnaces or boilers with a capacity of less than 500,000 Btu/hr.	PM < 0.4 lb/MMBtu Opacity < 20 % (Minn. R. 7011.0610)	For these units, based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement.
Infrared electric ovens	Opacity < 20% (Minn. R. 7011.0110)	While no emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate visible emissions. In addition, these units would be operated and vented directly into the building, so monitoring or testing is not feasible.
Individual units that have potential emissions of less than 2.28 lb/hr of various criteria pollutants and less than certain thresholds of HAPs.	PM < 0.4 lb/MMBtu Opacity < 20 % (Minn. R. 7011.0515) or PM, variable depending on airflow Opacity < 20% (Minn. R. 7011.0715)	The emissions estimation method varies according to the type of units. Based on general knowledge, it is highly unlikely that they could generate enough particulate matter or visible emissions to violate the rule limits. In addition, these units are often operated and vented directly into the building, so monitoring or testing is not feasible.

3.4 Permit Organization

The permit meets the MPCA Delta Guidance for ordering and grouping of requirements.

3.5 Public Comments

No public or U.S. EPA comments were received. The Permittee clarified the identity of emission units in GP 006. The issued permit reflects these corrections.

4. Conclusion

Based on the information provided by the 3M Company, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 16300080-001 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota rules.

Staff Members on Permit Team: Jonathan Amos, EarthTech, Inc.

Jeff Peltola, MPCA (Oversight)

Bob Berg, MPCA (Enforcement)

Dave Beil, MPCA (Peer Review)

Attachment: Emission calculation sheets