

**AIR EMISSION PERMIT NO. 16300023- 003**

**IS ISSUED TO**

3M Company

**3M COTTAGE GROVE BUILDING 17**  
10746 Chemolite 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
Total Facility Operating Permit	06/02/2000
Major Amendment	01/30/2008

This permit authorizes the Permittee to operate and modify 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/Limits to Avoid NSR

**Issue Date:** July 15, 2008

**Authorization to Construct and Operate (40 CFR § 52.21) Issuance Date:** June 30, 2008

**Final Permit Issuance Date:** July 15, 2008

**Expiration:** June 28, 2007\*

All Title I Conditions do not expire.

\* The Permittee may continue to operate this facility after the expiration date of the permit, per the provision under Minn. R. 7007.0450, subp. 3. (Title V Reissuance Application was timely.)

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Jeff J. Smith, Manager  
Air Quality Permits Section  
Industrial Division

for Brad Moore  
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. However, the permit shield does not apply to any national ambient air quality standard adopted under section 109 of the Clean Air Act and any state ambient air quality standard under Minn. R. ch. 7009.

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:**

3M owns and operates a Film Division located at Cottage Grove. This Division manufactures a variety of film products. 3M also owns and operates an Automotive Division which manufactures products for the automotive industry. Both Divisions are located in Building 17 at 3M Cottage Grove Center. At this site there are also pilot lines that produce products for the Film and Automotive divisions in small quantities.

Film and Automotive Divisions operations result in emissions of volatile organic compounds (VOC), hazardous air pollutants (HAP), carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM) and particulate matter less than 10 microns in size (PM<sub>10</sub>).

3M has requested a flexible emission cap (FlexCap) with a cap on VOC, PM and PM<sub>10</sub> emissions. Under a FlexCap permit, the Permittee may install new emission units and modify existing emission units without applying for an amendment as long as the applicable requirements for the new and modified units are already included in the permit, and total facility emissions, including emissions from the new and modified units, remain below the cap. Any modifications made under this FlexCap permit are thus not Major under federal Prevention of Significant Deterioration (PSD), New Source Review Regulations.

If the facility proposes to make a change subject to requirements not listed in the permit (e.g. 112 [g]) then that change is not preauthorized and would need to comply with the permitting process required by Minn. R. 7007.1150 through 7007.1500.

**Permit Action 002:**

This permit action was an Administrative Amendment to add NESHAP Subpart JJJJ requirements under the FC part of the permit.

**Permit Action 003:**

This amendment is for the expansion of the Paper Maker 2 & 4 lines. Emission units, control equipment, and stack vents were added to the facility description and the PTE data was also updated. Several requirements and citations were updated to follow current policies.

The 3M Cottage Grove Specialty Additives (Permit No. 16300002-001) included requirements for 3M Company to submit a PM<sub>10</sub> Modeling Protocol for the entire 3M Cottage Grove campus 365 days after issuance and to submit the PM<sub>10</sub> Modeling Results 180 days after the approval of the protocol. Those requirements are referenced in this permit.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17  
 Permit Number: 16300023 - 003

**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
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, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
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 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 and 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
<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>	Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

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.	Minn. R. 7017.2025, subp. 3
<b>MONITORING REQUIREMENTS</b>	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, 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.	Minn. R. 7007.0800, subp. 4(D)
<b>MODELING REQUIREMENTS</b>	hdr
Computer Dispersion Modeling Protocol: due 365 day after permit issuance of air permit # 16300002, modeling for PM10, covering all 3M Cottage Grove facilities receiving a Part 70 permit. This protocol will describe the proposed modeling methodology and input data, in accordance with MPCA modeling guidance for Title V air dispersion modeling analyses. This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7009.0020; Minn. R. 7007.0100; Minn. R. 7007.0800, subp. 2
Computer Dispersion Modeling Results: due 180 days after the MPCA review and approval of the PM10 modeling protocol required by air permit # 16300002, covering all 3M Cottage Grove facilities receiving a Part 70 permit. The submittal should adhere to MPCA modeling guidance for Title V air dispersion modeling analyses. This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7009.0020; Minn. R. 7007.0100; Minn. R. 7007.0800, subp. 2
This permit requires modeling to demonstrate compliance with the National Ambient Air Quality Standards (NAAQS). The Permittee may not make any change at the source that would result in an increase in PM10 or SO2 emissions, until it can be demonstrated that emissions from the facility as permitted do not cause an exceedance of the NAAQS. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments.  Once this requirement is met by demonstrating compliance as indicated, the requirement no longer applies.  (Continued below)	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
Demonstration of compliance with PM10 emission standards shall be shown through the submittal of Computer Dispersion Modeling Results, covering all 3M Cottage Grove facilities receiving a Part 70 permit.  Demonstration of compliance with SO2 emission standards shall be shown through the submittal of Computer Dispersion Screening for the 3M Cottage Grove - Specialty Additives facility.  This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	continued from above
<b>RECORDKEEPING</b>	hdr
Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

When the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. For nonexpiring permits, these records shall be kept for a period of five years from the date that the change was made. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format.	Minn. R. 7007.1200, subp. 4
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 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.  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 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.  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
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. The Permittee shall submit this on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

**Subject Item: GP 001 Automotive Lines**

- Associated Items:** CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 CE 004 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 EU 010 Mixing Equipment  
 EU 011 Web Conditioning Equipment  
 EU 012 Mixing Equipment  
 EU 013 Raw Material Handling Equipment  
 EU 014 Cutting Equipment  
 EU 015 Raw Material Handling Equipment  
 EU 016 Mixing Equipment  
 EU 017 Web Conditioning Equipment  
 EU 018 Mixing Equipment  
 EU 019 Raw Material Handling Equipment  
 EU 024 Web Conditioning Equipment  
 EU 025 Material Transportation Equipment  
 EU 026 Raw Material Handling Equipment  
 EU 027 Solids Collection  
 EU 031 PM2/4 Mixing Equipment  
 SV 010 Dust Collector Emissions

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.04 grains/dry standard cubic foot of exhaust gas	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000 (most stringent, meets limit set by Minn. R. 7011.0700 to 7011.0735)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B) 40 CFR Section 52.1222
Operate and maintain control equipment to achieve a control efficiency for Total Particulate Matter: greater than or equal to 99 percent control efficiency	Title I Condition: Limit for modifications made after the issuance date of this permit to avoid classification as a major source or modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0065 subp. 1(A) and subp. 1(B)
Operate and maintain control equipment to achieve a control efficiency for Particulate Matter < 10 micron: greater than or equal to 93 percent control efficiency	Title I Condition: Limit for modifications made after the issuance date of this permit to avoid classification as a major source or modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0065, subp. 1(A) and subp. 1(B)
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 4.5 inches of water column or as established during the most recent performance test demonstrating compliance. This pressure drop range is applicable to CE 003.	Title I Condition: Limit for modifications made after the issuance date of this permit to avoid classification as a major source or modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0065, subp. 1(A) and subp. 1(B)
Pressure Drop: greater than or equal to 0.01 inches of water column and less than or equal to 10.0 inches of water column or as established during the most recent performance test demonstrating compliance. This pressure drop range is applicable to CE 004.	Title I Condition: Limit for modifications made after the issuance date of this permit to avoid classification as a major source or modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0065, subp. 1(A) and subp. 1(B)
Recordkeeping of Pressure Drop. Once each day that any emission unit in this group is operated the Permittee shall record the time and date of each pressure drop reading drop across the air pollution control equipment and whether or not the recorded pressure drop was within the range specified in this permit.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as a major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7011.0080



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

<p>Recordkeeping of Visible Emissions: Once each week that any emission unit included in this Group operates, observe and record the absence or presence of visible emissions from the exhaust stack and the date and time of the inspection.</p>	<p>Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as a major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7011.0080</p>
<p>The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080. The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the fabric filter is operating. The Permittee shall document periods of non-operation of the control equipment.</p>	<p>Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>
<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:                  - visible emissions are observed;                  - the recorded pressure drop is outside the required operating range; or                  - the fabric filter or any of its components are found during the inspections to need repair.                  Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O &amp; M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.</p>	<p>Minn. R. 7007.0800, subp. 4, 5, and 14</p>
<p>The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as required by Minn. R. 7011.0075, subp. 2(A) to 2(I).</p>	<p>Minn. R. 7011.0075, subp. 2</p>
<p>The Permittee shall vent emissions from all emission units in this Group to control equipment CE 003, when in operation.</p>	<p>Title I Condition: Limit for modifications made after the issuance date of this permit to avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

**Subject Item: GP 002 Automotive Lines Heating Equipment**

**Associated Items:** EU 020 Heating Equipment

EU 021 Heating Equipment

EU 023 Heating Equipment

EU 028 Dryer

EU 029 Dryer

EU 030 Heater

What to do	Why to do it
Total Particulate Matter: less than 0.40 lbs/million Btu heat input . The potential to emit from the unit is less than 0.40 lb/MMBtu due to equipment design and allowable fuels.	Minn. R. 7011.0515, subp. 1
Sulfur Dioxide: less than or equal to 2.0 lbs/million Btu heat input . The potential to emit from the unit is less than 2.0 lb/MMBtu due to equipment design and allowable fuels.	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0515, subp. 2
<p>Fuel Use: The Permittee shall use only natural gas or liquified petroleum gas (LPG) for fuel in the emission units in this Group.</p> <p>LPG consists of propane, butane or mixtures of these with small amounts of other hydrocarbons.</p>	Minn. R. 7007.0800, subp. 4 (meets limit required by Minn. R. 7007.0700 to 7007.0735)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

**Subject Item: GP 003 North Film Maker Line**

- Associated Items:** CE 001 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 CE 002 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 EU 001 Feeder System  
 EU 002 Extruder  
 EU 003 Casting Die  
 EU 004 Grinder  
 SV 001 Baghouse Emissions  
 SV 002 Baghouse Emissions  
 SV 003 Extruder Emissions  
 SV 004 Extruder/Casting Die Emissions

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B) 40 CFR Section 52.1222
The Permittee shall vent emissions from emission units EU001 and EU004 to control equipment CE 001 or CE 002, when in operation.	Title I Condition: Limit for modifications made after the issuance date of this permit to avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Operate and maintain control equipment to achieve a control efficiency for Particulate Matter < 10 micron: greater than or equal to 93 percent control efficiency	Title I Condition: Limit for modifications made after the issuance date of this permit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0065, subp. 1(A)
Operate and maintain control equipment to achieve a control efficiency for Total Particulate Matter: greater than or equal to 99 percent control efficiency	Title I Condition: Limit for modifications made after the issuance date of this permit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0710, subp. 2
Pressure Drop: greater than 0.01 inches of water column and less than or equal to 10 inches of water column or as established during the most recent performance test demonstrating compliance for CE001	Title I Condition: Operational requirement for limit taken to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0080
Pressure Drop: greater than .15 inches of water column and less than or equal to 6.0 inches of water column or as established during the most recent performance test demonstrating compliance for CE002	Title I Condition: Operational requirement for limit taken to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0080
Monitoring: Once each day that any emission unit in this group is operated, the Permittee shall record the pressure drop across the air pollution control equipment.	Title I Condition: Monitoring for limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4(B) 40 CFR Section 70.6(a)(3)(i)(B)
Monitoring: Once each week that any emission unit included in this Group operates, observe and record the absence or presence of visible emissions from the exhaust stack.	Title I Condition: Monitoring for limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4(B) 40 CFR Section 70.6(a)(3)(i)(B)
Corrective Actions: If the pressure drop is outside the specified range or visible emissions are observed, implement the corrective actions in the Operation and Maintenance Plan.	Minn. R. 7007.0800, subp. 14 and 16(J)
Maintenance of Control Equipment: The Permittee shall maintain the control equipment as specified in Minn. R. 7011.0075, subp. 2(A)-(G). The Permittee shall keep records of maintenance activities and corrective actions as specified in Minn. R. 7011.0075, subp. 2(H) and (I).	Minn. R. 7007.0800, subp. 2 and subp. 14; Minn R. 7011.0075, subp. 2. 40 CFR Section 52.1222

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

**Subject Item: GP 004 Film Maker Line (NESHAP JJJJ)**

- Associated Items:** EU 005 Corona Treater  
 EU 006 Laminator Casting Die  
 EU 007 Oven  
 EU 008 Corona Treater  
 EU 009 Duster  
 SV 005 Corona Treater Emissions  
 SV 006 Extruder Emissions  
 SV 007 Oven Emissions  
 SV 008 Oven Emissions  
 SV 009 Corona Treater Emissions

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.04 grains/dry standard cubic foot of exhaust	Title I Condition: Limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 (most stringent, meets limit set by Minn. R. 7011.0700 to 7011.0735)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B) 40 CFR Section 52.1222
NESHAP Subpart JJJJ REQUIREMENTS	hdr
Paper and Other Web Coating NESHAP - Comply with the standards in 40 CFR 63.3370 beginning on December 5, 2005 for the "affected source". The Subpart JJJJ "affected source" includes all the units in this group.	40 CFR 63.3370
Based on the current and expected operations of the affected source, this permit only includes the regulations for uncontrolled option using weight ration. If the Permittee later chooses to switch to one of the other compliance options, if allowed in the standard, the Permittee shall comply with all applicable portions of 40 CFR pt. 63, subp. JJJJ for those options. In addition, the Permittee shall apply for a permit amendment, as appropriate (e.g., to add applicable NESHAP language, installation of an oxidizer, etc.).	Minn. R. 7007.1150; Minn. R. 7007.0800 subp. 2
EMISSION AND OPERATING LIMITS - No Control Option for this facility	hdr
The Permittee must limit organic HAP emissions to the level specified below:  (2) No more than 4 percent of the mass of coating materials applied for each month;  These limits apply to the collection of all web coating lines (as defined in 40 CFR Section 63.3310).	40 CFR Section 63.3320(b)(1)-(3); Minn. R. 7011.7385
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

<p>Maintain the following records on a monthly basis as needed to demonstrate compliance:</p> <p>(1) Records specified in 40 CFR Section 63.10(b)(2) of all measurements need to demonstrate compliance, including:</p> <p>(i) continuous emission monitor data in accordance with 40 CFR Section 63.3350(d);</p> <p>(ii) control device and capture system operating parameter data in accordance with 40 CFR Section 63.3350(c), (e), and (f);</p> <p>(iii) organic HAP content data used for demonstrating compliance in accordance with 40 CFR Section 63.3360(c);</p> <p>(iv) volatile matter and coating solids content data used for demonstrating compliance with 40 CFR Section 63.3360(d);</p> <p>(v) overall control efficiency determination using capture efficiency and control device destruction or removal efficiency test results in accordance with 40 CFR Section 63.3350(e) and (f);</p> <p>(continued below)</p>	<p>40 CFR Section 63.3410(a); 40 CFR Section 63.10(b)(1); Minn. R. 7011.7385</p>
<p>(vi) material usage, organic HAP usage, volatile matter usage, and coating solids usage and compliance demonstrations using these data in accordance with 40 CFR Section 63.3370(b), (c), and (d).</p>	<p>40 CFR Section 63.3410(a); 40 CFR Section 63.10(b)(1); Minn. R. 7011.7385 (continued from above)</p>
<p><b>TESTING REQUIREMENTS</b></p>	<p>hdr</p>
<p>While organic HAP is controlled on any individual coating line or group of coating lines by limiting organic HAP or volatile matter content of coatings, the Permittee must determine the organic HAP or volatile matter and coating solids content of the coating materials according to procedures in 40 CFR Section 63.3360(c) and (d). If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to 40 CFR Section 63.3360(g).</p>	<p>40 CFR Section 63.3360(a); Minn. R. 7011.7385</p>
<p>Method 311 - The Permittee may test the coating material in accordance with Method 311 of Appendix A of Part 63. The Method 311 determination may be performed by the manufacturer of the coating material and the results provided to the Permittee. The organic HAP content must be calculated according to the criteria and procedures in 40 CFR Section 63.3360(c)(1)(i)-(iii).</p>	<p>40 CFR Section 63.3360(c)(1); Minn. R. 7011.7385</p>
<p>Method 24 - The Permittee may determine the volatile organic content of coatings as mass fraction of nonaqueous volatile matter and use it as a substitute for organic HAP using Method 24 of Appendix A of Part 63. The Method 24 determination may be performed by the manufacturer of the coating and the results provided to the Permittee.</p>	<p>40 CFR Section 63.3360(c)(2); Minn. R. 7011.7385</p>
<p>Formulation Data - The Permittee may use formulation data to determine the organic HAP mass fraction of a coating material. Formulation data may be provided to the Permittee by the manufacturer of the material. In the event of an inconsistency between Method 311 test data and a facility's formulation data, and the Method 311 test value is higher, the Method 311 data will govern. Formulation data may be used provided that the information represents all organic HAP present at a level equal to or greater than 0.1 percent for OSHA-defined carcinogens as specified in 29 CFR Section 1910.1200(d)(4) and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used.</p>	<p>40 CFR Section 63.3360(c)(3); Minn. R. 7011.7385</p>
<p>Volatile matter retained in the coated web or otherwise not emitted to the atmosphere - If you choose to take this into account when determining compliance with the emission standards, you must develop a testing protocol to determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere and submit it to the Administrator for approval with your site-specific test plan under 40 CFR Section 63.7(f). If you intend to take into account the mass of volatile matter retained in the coated web after curing or drying or otherwise not emitted to the atmosphere and demonstrate compliance according to 40 CFR Section 63.3370(c)(3), (c)(4), or (d), then the protocol must determine the mass of organic HAP retained in the coated web or otherwise not emitted to the atmosphere. Otherwise, compliance must be shown using the volatile organic matter content as a surrogate for the HAP content of the coatings.</p>	<p>40 CFR Section 63.3360(g); Minn. R. 7011.7385</p>
<p><b>COMPLIANCE DEMONSTRATION</b></p>	<p>hdr</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

<p>Demonstrate that:</p> <p>(iii) the monthly average of all coating materials used does not exceed 0.04 kg organic HAP per kg coating material as-applied, using the procedures set out in 40 CFR Section 63.3370(c)(3). Use Equation 4 of 40 CFR Section 63.3370 to determine compliance with 40 CFR Section 63.3320(b)(2) in accordance with 40 CFR Section 63.3370(c)(5)(ii).</p>	<p>40 CFR Section 63.3370(a)(2); Minn. R. 7011.7385 (continued from above)</p>
<p>Demonstrate compliance by tracking total monthly organic HAP applied, and demonstrate that the total monthly organic HAP applied does not exceed the calculated limit based on emission limitations. Follow the procedures set out in 40 CFR Section 63.3370(d). Show that the monthly HAP applied (Equation 6 of 40 CFR Section 63.3370) is less than the calculated equivalent allowable organic HAP (Equation 13a or 13b of 40 CFR Section 63.3370).</p>	<p>40 CFR Section 63.3370(a)(3); Minn. R. 7011.7385</p>
<p>GENERAL PROVISIONS, 40 CFR Part 63, subp. A</p>	<p>hdr</p>
<p>Proper Operation and Maintenance: At all times the Permittee shall operate and maintain the emission unit subject to the MACT standard and its associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.</p>	<p>40 CFR Section 63.6(e)(1)(i); Minn. R. 7011.7000</p>
<p>Comply with emission standards at all times except during startup, shutdown, and malfunction.</p>	<p>40 CFR Section 63.6(f)(1); Minn. R. 7011.7000</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

**Subject Item: GP 005 PM2 and PM4 Heaters**

- Associated Items:** EU 032 Heating Equipment  
 EU 033 Heating Equipment  
 EU 034 Heating Equipment  
 EU 035 Heating Equipment  
 EU 036 Heating Equipment  
 EU 037 Heating Equipment  
 SV 018 Heating Equipment Emissions  
 SV 019 Heating Equipment Emissions  
 SV 020 Heating Equipment Emissions  
 SV 021 Heating Equipment Emissions  
 SV 022 Heating Equipment Emissions  
 SV 023 Heating Equipment Emissions

What to do	Why to do it
Total Particulate Matter: less than 0.40 lbs/million Btu heat input . The potential to emit from the unit is 0.02 lb/MMBtu due to equipment design and allowable fuels.	Minn. R. 7011.0515, subp. 1
Sulfur Dioxide: less than or equal to 2.0 lbs/million Btu heat input . The potential to emit from the unit is 0.002 lb/MMBtu due to equipment design and allowable fuels.	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0515, subp. 2
Fuel Usage: Natural Gas only.	Minn. R. 7007.0800, subp 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

**Subject Item: GP 006 VOC Emissions**

**Associated Items:** CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

- EU 002 Extruder
- EU 003 Casting Die
- EU 005 Corona Treater
- EU 006 Laminator Casting Die
- EU 008 Corona Treater
- EU 009 Duster
- EU 013 Raw Material Handling Equipment
- EU 021 Heating Equipment
- EU 023 Heating Equipment
- EU 028 Dryer
- EU 029 Dryer
- EU 030 Heater
- EU 032 Heating Equipment
- EU 033 Heating Equipment
- EU 034 Heating Equipment
- EU 035 Heating Equipment
- EU 036 Heating Equipment
- EU 037 Heating Equipment

What to do	Why to do it
VOC PRECAP REQUIREMENTS	hdr
This permit establishes limits on the facility to keep a minor source under New Source Review. This includes changes that might otherwise qualify as insignificant modification and minor or moderate amendments for future modifications. The Permittee cannot make any change at the source that would make the source a major source under New Source Review until a major permit amendment has been issued.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
Volatile Organic Compounds: less than 100 tons/year using 12-month Rolling Sum to be calculated by the 30th day of each month for the previous 12-months period as described later in this permit. All significant emission units added to Building 17, as allowed in this permit shall be included in this calculation. VOC contents for each VOC containing material shall be determined as described under Certified Material Content described below.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
VOC PreCap: If the Permittee replaces any existing non-combustion VOC-emitting equipment, adds new VOC-emitting equipment, or modifies the existing equipment listed in GP 006, such equipment is subject to the above VOC limit as well as all of the requirements of GP 006. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. The Permittee is not required to repeat VOC calculations described in Minn. R. 7007.1200, subp. 2.  A permit amendment will still be needed regardless of the emissions increase if the change will be subject to a new applicable requirement or requires revisions to the limits or monitoring and recordkeeping in this permit.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
The Permittee may replace air pollution control equipment with equipment listed in Minn. R. 7011.0070 provided the Permittee complies with the maintenance requirements specified in Minn. R. 7011.0075, subp. 2 and with the monitoring requirements specified in Minn. R. 7011.0080 applicable to the replacement equipment.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

<p>Monthly Recordkeeping -- VOC Emissions.</p> <p>By the 15th of the month, the Permittee shall calculate and record the following:</p> <p>1) The total usage of each VOC-containing material for the previous calendar month using the daily usage records. This record shall also include the VOC contents of each material as determined by the Material Content requirement of this permit;</p> <p>2) The VOC emissions for the previous month using the formulas specified in this permit; and</p> <p>3) The average monthly VOC emissions for the previous 12-month period by summing the monthly VOC emissions data for the previous 12 months and dividing by 12.</p>	<p>Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 &amp; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 and 5</p>
<p>Monthly Calculation -- VOC Emissions.</p> <p>The Permittee shall calculate VOC emissions using the following equations:</p> <p>VOC (tons/month) = V - W  <math>V = (A1 \times B1) + (A2 \times B2) + (A3 \times B3) + \dots</math>  <math>W = (C1 \times D1) + (C2 \times D2) + C3 \times D3) + \dots</math></p> <p>where:</p> <p>V = total VOC used in tons/month;          A# = amount of each VOC containing material used, in tons/month;          B# = weight percent VOC in A#, as a fraction.          W = the amount of VOC shipped in waste, in tons/month;          C# = amount, in tons/month, of each VOC-containing waste material shipped. If the Permittee chooses to not take credit for waste shipments, this parameter would be zero; and          D# = weight percent of VOC in C#, as a fraction.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Material Content: VOC, HAPs and Solids (PM and PM10) contents in all materials shall be determined by a 1) Material Safety Data Sheet (MSDS), 2) Certified Product Data Sheet (CPDS), or 3) 3M ADSD laboratory formulation sheet or 3M product specification information, whichever is most representative for each material used. If a material content range is given, the highest number in the range shall be used in all permit calculations. When using the above resources as the basis of calculating particulate emissions, the conservative assumption is made that PM consists entirely of PM less than 10 microns. Other alternative methods approved by the MPCA may be used to determine the VOC, HAPs and Solids content. The Commissioner reserves the right to require the Permittee to determine the VOC, HAP and solids contents of any material according to EPA reference methods.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Waste Credit: If the Permittee elects to obtain credit for HAPs or VOC shipped in waste materials, the Permittee shall either use item 1 or 2 to determine the VOC and total and individual HAP content for each credited shipment.</p> <p>1. The Permittee shall analyze a sample of each container of waste, to determine weight content of VOC and each individual HAP.</p> <p>2. The Permittee may use 1) Material Safety Data Sheet (MSDS), 2) Certified Product Data Sheet (CPDS), or 3) 3M ADSD laboratory formulation sheet or 3M product specification information for raw materials (using the same content data used to determine the content of raw material) or a 3M Waste Stream Profile (WSP) to determine the VOC and HAP content of any waste material according to EPA reference methods or any MPCA approved method. If the waste contains several materials, the content of mixed waste shall be assumed to be the average VOC and individual HAP content of any of the materials.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Recordkeeping of Equipment and Formulation Changes:</p> <p>The Permittee shall keep records of any emission unit that is replaced or installed. This record shall be updated any time equipment is replaced or installed. The record shall include the date the equipment was replaced (startup of new shutdown of existing) or installed the corresponding EU number, the manufacturer and model numbers of the new equipment.</p> <p>Maximum Contents of Materials: The Permittee assumed certain worst-case contents of materials when determining the short term potential to emit of units in GP006. Changing to a material that has a higher content of any of the given pollutants is considered a change in method of operation that must be evaluated under Minn. R. 7007.1200, subp. 3 to determine if a permit amendment or notification is required under Minn. R. 7007.1150.</p>	<p>Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 &amp; Minn. R. 7007.3000; Minn. R. 7005.0100, subp. 35a</p>

**TABLE B: SUBMITTALS**

B-1 07/15/08

Facility Name: 3M Cottage Grove Bldg 17  
Permit Number: 16300023 - 003

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.

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 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

Send any application for a permit or permit amendment to:

AQ Permit Technical Advisor  
Industrial Division  
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.

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 07/15/08

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

<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
Notification	due 30 days after Initial Startup of CE004.	GP001

**TABLE B: RECURRENT SUBMITTALS**

B-3 07/15/08

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023 - 003

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Semiannual Continuous Compliance Report	due 30 days after end of each calendar half-year starting 12/05/2005 applicable to each emission unit subject to a standard in 40 CFR Part 63. This may be submitted with the semiannual compliance report required under Part 70 (See Table B of this permit). The report must contain the information listed in 40 CFR Section 63.3400(c)(2).	GP004
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 06/28/2002. 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
Annual Report	due 91 days after end of each calendar year starting 06/28/2002. The Permittee shall submit an annual report that describes the changes made at the facility during the previous calendar year. The report shall document the 12-month rolling sum calculations for each month during the previous calendar year and any New Source Performance Standards (40 CFR Pt. 60) that were triggered by changes made during the previous calendar year.	Total Facility
Compliance Certification	due 31 days after end of each calendar year starting 06/28/2002 (for the previous calendar year). The Permittee shall submit this 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**

Facility Name: 3M Cottage Grove Bldg 17

Permit Number: 16300023-002

### Insignificant Activities

1. Beringer Oven
2. Maintenance shops
3. Quality Control Labs
4. A1 Line
5. A5 Line
6. PM1 Line
7. C10 Test Oven
8. Torret Baghouse
9. Residual Solids Handling Air Blower
10. C10 Line
11. PM 2 & 4 Vermiculite Silo and Baghouse
12. PM 2 & 4 Possible Construction of an Additional Silo and Baghouse
13. Latex Storage Tanks (6)

## Insignificant Activities and Applicable Requirements

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Applicable Requirement
3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane.	Minn. R. 7011.0510/0515
3(B)	Furnaces, boilers, and incinerators:	
	Infrared electric ovens; and	Minn. R. 7011.0105/0110
	Fuel burning equipment with a capacity less than 500,000 Btu/hour but only if the total combined capacity of all fuel burning equipment at the stationary source with a capacity less than 500,000 Btu per hour is less than or equal to 2,000,000 Btu/hour.	Minn. R. 7011.0510/0515 <i>OR</i> Minn. R. 7011.0610 + Minn. R. 7011.1215, subp. 3
3(C)	Fabrication operations: equipment used exclusively for forging, pressing, drawing, spinning, or extruding hot metals.	Minn. R. 7011.0710/0715
3(D)	Processing operations:	
	1. open tumblers with a batch capacity of 1,000 pounds or less; and	Minn. R. 7011.0710/0715
	2. Equipment venting particulate matter (PM) or particulate matter less than 10 microns (PM-10) inside a building, provided that emissions from the equipment are: a). filtered through an air cleaning system; and b). vented inside of the building 100% of the time.	Minn. R. 7011.0710/0715
3(E)	Storage tanks:	
	1. gasoline storage tanks with a combined total tankage capacity of not more than 10,000 gallons; and	Minn. R. 7011.0710/0715 <i>OR</i> Minn. R. 7011.1505, subp. 2(B)/1505, subp. 3(B) <i>OR</i> Minn. R. 7011.0105/0110 ( <i>if not associated with industrial process equipment</i> )
	2. non-hazardous air pollutant VOC storage tanks with a combined total tankage capacity of not more than 10,000 gallons of non-hazardous air pollutant VOCs and with a vapor pressure of not more than 1.0 psia at	Minn. R. 7011.0710/0715 <i>OR</i> Minn. R. 7011.1505, subp. 2(B)/1505, subp. 3 (B)

<b>Minn. R. 7007.1300, subpart</b>	<b>Rule Description of the Activity</b>	<b>Applicable Requirement</b>
	60 degrees Fahrenheit.	OR Minn. R. 7011.0105/0110 ( <i>if not associated with industrial process equipment</i> )
3(F)	Cleaning operations: commercial laundries, not including dry cleaners and industrial launderers.	Minn. R. 7011.0105/0110
3(G)	Emissions from a laboratory, as defined in the subpart.	Minn. R. 7011.0510/0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
3(H)	Miscellaneous:	
	1. total usage of less than 200 gallons of VOC (including hazardous air pollutant-containing VOC) combined in any consecutive 12 months period at a stationary source;	Minn. R. 7011.0710/0715 <i>OR</i> Minn. R. 7011.0105/0110
	2. equipment used exclusively for packaging lubricants or grease;	Minn. R. 7011.0710/0715 <i>OR</i> Minn. R. 7011.0105/0110
	3. equipment used for hydraulic or hydrostatic testing;	Minn. R. 7011.0710/0715
	4. brazing, soldering or welding equipment;	Minn. R. 7011.0510/.0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
	5. blueprint copiers and photographic processes;	Minn. R. 7011.0105/0110
	6. equipment used exclusively for melting or application of wax;	Minn. R. 7011.0510/.0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
	7. nonasbestos equipment used exclusively for bonding lining to brake shoes; and	Minn. R. 7011.0710/0715
	8. cleaning operations: alkaline/phosphate cleaners and associated cleaners and associated burners.	Minn. R. 7011.0510/.0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
3(I)	Individual emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than:  1. 4,000 lbs/year of carbon monoxide; and  2. 2,000 lbs/year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten	Varies with type of emission unit.

<b>Minn. R. 7007.1300, subpart</b>	<b>Rule Description of the Activity</b>	<b>Applicable Requirement</b>
	microns, volatile organic compounds (including hazardous air pollutant-containing VOC), and ozone.	
3(J)	Fugitive Emissions from roads and parking lots.	Minn. R. 7011.0150
3(K)	Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities not associated with primary production processes at the stationary source, such as spray painting of buildings, machinery, vehicles, and other supporting equipment.	Minn. R. 7011.0710/0715



**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 16300023-003**

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 determination to issue the permit.

**1. General Information**

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

Applicant/Address	Stationary Source/Address (SIC Code: <b>3081 &amp; 2297</b> )
3M Co P.O. Box 33331 St. Paul, MN 55133	10746 Chemolite Road Cottage Grove, MN 55016 Washington County
Contact: Tina Mumm Phone: 651-778-5036	

**1.2. Description of the Facility**

Building 17 includes two separate and unrelated operations, a film production facility, and an automotive products facility. 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.

**1.3 Description of the Activities Allowed by this Permit Action**

This amendment is for the expansion of the Paper Maker 2 & 4 lines, including the addition of some insignificant activities. Emission units, control equipment, and stack vents were added to the facility description and the PTE data was also updated. Several requirements and citations were updated to follow current policies. The NESHAP JJJJ requirements were updated to reflect the facility's compliance demonstration methods, and they were moved from the total facility level to GP 004, which contains all the applicable units. The PM PreCap language was removed do to NAAQS modeling concerns and the VOC PreCap language was moved to GP 006.

**NAAQS Modeling:** Initial screening in 2003 of the 3M Cottage Grove Bldg 17 facility predicted concentrations above the NAAQS 24-Hour PM<sub>10</sub> standard.

The 3M Cottage Grove Specialty Additives (permit # 16300002-001) included requirements for 3M Co. to submit a Modeling Protocol for the entire 3M Cottage Grove campus 365 days after issuance and to submit the modeling 180 days after the approval of the protocol. Those requirements are referenced in this permit. An additional requirement preventing PM10 and SO2 increases (including insignificant modifications) was included to prevent the facility from “causing or contributing” to a potential NAAQS violation.

**1.4. Facility Emissions:**

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

	PM tpy	PM <sub>10</sub> tpy	SO <sub>2</sub> tpy	NO <sub>x</sub> tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Limited PTE Increase Due To Modification	1.16	4.94	.05	7.88	0.53	0.0	0.0	0.0
Total Facility Limited Potential Emissions	3.83	15.16	.066	10.07	8.41	100.0	7.97	8.24
Total Facility Actual Emissions (2006)	9.85	9.85	0.00	0.35	0.30	5.47	HAPs are not reported in emission inventory	

**Table 4. Facility Classification**

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		PM, PM10, VOC	SO2, NOx, CO
Part 70 Permit Program	PM, PM10, VOC		
Part 63 NESHAP		X	

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

New Source Review

The facility is an existing major source under New Source Review regulations. No changes are authorized by this permit.

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)

The facility is a major source under 40 CFR pt. 63 and is subject to

- "Paper and Other Web Coating" category standards, 40 CFR pt. 63, subp. JJJ

## Minnesota State Rules

Example: 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. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment

**Table 5. Regulatory Overview of Units Affected by the Modification/Permit Amendment**

<b>EU, GP, or SV</b>	<b>Applicable Regulations</b>	<b>Comments:</b>
FC	Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7009.0020; Minn. R. 7007.0100; Minn. R. 7007.0800, subp. 2	Modeling Protocol to be submitted for PM10 for the entire 3M Cottage Grove campus 30 days after permit Issuance. Modeling Analysis Results to be submitted for PM10 for the entire 3M Cottage Grove campus 180 days after permit Issuance.
GP 001		Added EU031 and CE004 to GP 001
GP 002	Minn. R. 7011.0515	Added Indirect Heating requirements
GP 004	Minn. R. 7011.0715 40 CFR § 63 subp. JJJJ	Added IPER requirements to GP 004 Moved NESHAP JJJJ requirements from FC to GP 004
GP 005	Minn. R. 7011.0515	Added Indirect Heating requirements for the new heating equipment. Limited fuel usage to Natural Gas only.
GP 006		Moved and updated the VOC PreCap requirements to GP 006. PM/PM10 PreCap Language was removed due to the NAAQS issue.

The language 'This is a state-only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act' refers to permit requirements that are mandated by state law rather than by the federal Clean Air Act. The language is to clarify the distinction between permit conditions that are required by federal law and those that are required by state law. State law requirements are not enforceable by EPA or by citizens under the federal Clean Air Act, but are fully enforceable by the MPCA and citizens under provisions of state law.

### **3. Technical Information**

#### **3.1 Calculations of Potential to Emit**

Attachment 1 to this TSD contains the emissions calculations and PTE Summary for the facility.

#### **3.2 Insignificant Activities**

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

**Table 5. Insignificant Activities**

<b>Insignificant Activity</b>	<b>General Applicable Emission limit</b>	<b>Discussion</b>
Latex Storage Tanks (6)	7007.1300, subp. 3(I)	Individual emission units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than:  (1) 4,000 pounds per year of carbon monoxide; and  (2) 2,000 pounds per year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, VOCs (including hazardous air pollutant-containing VOCs), and ozone.

### **3.3 Permit Organization**

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

### **3.4 Comments Received**

Public Notice Period: 5/29/08 – 6/27/08

EPA 45-day Review Period: 5/29/08 – 7/14/08

Comments were received from the public during the public notice period.

### **4. Conclusion**

Based on the information provided by 3M Company, the MPCA has reasonable assurance that the operation of the emission facility, as described in the Air Emission Permit No. 16300023-003, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Chris Buntjer (permit writer/engineer)  
Christian Norman (enforcement)  
Curt Stock (stack testing)  
Ben Klismith (peer reviewer)

AQ File No. 23AFH; DQ 1870

Attachments: 1. PTE Summary and Emissions Increase Calculation Spreadsheets  
2. Facility Description and CD-01 Forms