

**AIR EMISSION PERMIT NO 08500049-010
(AMENDMENT NO. 11 TO AIR EMISSION PERMIT NO. 23BC-87-OT-01)**

IS ISSUED TO

3M COMPANY
for
3M Hutchinson
915 Adams Street Southeast
Hutchinson, MN 55350

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

| | |
|--------------------|-------------------------|
| Permit Type | Application Date |
| Major Amendment | October 21, 2003 |

This permit supersedes Air Emission Permit No. 08500008-020 (Amendment No. 7 to Air Emission Permit No. 23BC-87-OT-01), and authorizes the Permittee to operate the permitted units listed herein at the stationary source listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit and with all general conditions listed in Minn. R. pt. 7007.0800, subp. 16, which are incorporated by reference. Any changes or modifications to the stationary source must be performed in compliance with Minn. Rules pts. 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: NSR/PSD

Issue Date: February 25, 2004

Expiration: Upon incorporation into the Part 70 permit
All Title I Conditions do not expire.

Ann M. Foss
Major Facilities Section Manager
Majors and Remediation 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 addresses 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.

PERMIT DESCRIPTION:

This permit replaces Air Emission Permit No. 08500008-020 (Amendment No. 7 to Air Emission Permit No. 23BC-87-OT-01). 3M Hutchinson is a major source of criteria pollutants under the Prevention of Significant Deterioration (PSD) program. In 1998, a synthetic minor permit was issued for installation of the 7L line. Line 7L uses low VOC coatings in the manufacture of pressure sensitive tapes, and the line has the capability to manufacture numerous products. At the time, due to forecasted production and predicted utilization of line 7L, 3M concluded that the 39.5 ton per year (tpy) limit would provide sufficient operations flexibility.

Current forecasts indicate that the 39.5 tpy limit is no longer sufficient. In order to relax a limit taken to avoid major New Source Review, a PSD analysis, including Best Available Control Technology (BACT), is required. Although the full potential to emit (PTE) of the line was calculated to be over 171 tpy in the Title V permit application, 3M requests a VOC limit of 85 tpy. This limit will provide sufficient manufacturing flexibility.

This permit raises the emission limit for the 7L Coating Line from 39.5 tpy to 85 tpy, while incorporating a BACT limit of 0.14 kilogram (kg) VOC per kg coating solids applied.

The coating line is an affected facility under New Source Performance Standards (NSPS) Subpart RR, and National Emissions Standards for Hazardous Air Pollutants (NESHAP) Subpart JJJJ. NSPS conditions are incorporated into this permit. The compliance date for the NESHAP is December 2005; specific NESHAP requirements will be added to the permit at an appropriate later date.

TABLE A: LIMITS AND OTHER REQUIREMENTS

3/2/2004 10:47 AM

Facility Name: 3M Hutchinson
 Permit Number: 08500049-010

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 |
|---|--------------------------------|
| A. OPERATIONAL REQUIREMENTS | |
| 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 |
| 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 |
| Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. | Minn. R. 7030.0010 - 7030.0080 |
| Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A). | Minn. R. 7007.0800, subp. 9(A) |
| The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16. | Minn. R. 7007.0800, subp. 16 |
| B. RECORDKEEPING | |
| 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). | 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) |
| C. REPORTING/SUBMITTALS | |
| 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 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

3/2/2004 10:47 AM

Facility Name: 3M Hutchinson
 Permit Number: 08500049-010

| What to do | Why to do it |
|--|---|
| <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. | Minn. R. 7019.1000, subp. 1 |
| <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> | Minn. R. 7007.1150 through Minn. R. 7007.1500 |
| <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> | Minn. R. 7007.1400, subp. 1(H) |
| <p>Emission Fees: due 60 days after receipt of an MPCA bill.</p> | Minn. R. 7002.0005 through Minn. R. 7002.0095 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

3/2/2004 10:47 AM

Facility Name: 3M Hutchinson
 Permit Number: 08500049-010

Subject Item: GP 001 7L Coater and Associated Equipment

- Associated Items:** EU 370 7L Precoat/Oven 1 (previously identified as Precoat No. 1 Applicator and Oven)
 EU 371 7L Precoat/Oven 3 (previously identified as Precoat No. 2 Applicator and Oven)
 EU 372 7L Adhesive Coater/Oven (previously identified as Functional Coat Applicator and Oven)
 EU 373 7L Flame Treater A (previously identified as Flame Treater)
 EU 419 7L Flame Treater B (previously included as part of EU 373)

| What to do | Why to do it |
|--|---|
| A. POLLUTANT LIMITS | |
| Volatile Organic Compounds (VOC): less than or equal to 0.14 kg VOC/kg coating solids applied, calculated on a weighted average basis for a calendar month as described in this permit. | Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000 |
| Volatile Organic Compounds (VOC): less than or equal to 0.2 kg VOC/kg coating solids applied, calculated on a weighted average basis (g) for a calendar month as described in this permit (this limit applies in addition to the BACT limit when the VOC input to the 7L line exceeds 45 Mg (50 tons) per 12 consecutive months). | 40 CFR Section 60.442(a); Minn. R. 7011.2560 |
| Volatile Organic Compounds (VOC): less than or equal to 85 tons/year emitted on a 12-month rolling sum basis to be calculated by the 15 th day of each calendar month, as described in this permit For the first 11 calendar months of operation under this permit, the monthly VOC limit shall be as follows, calculated as a cumulative sum of emissions since starting operation under this permit: Month 1: 8.0 tons Month 2: 15.0 tons Month 3: 22.0 tons Month 4: 29.0 tons Month 5: 36.0 tons Month 6: 43.0 tons Month 7: 50.0 tons Month 8: 57.0 tons Month 9: 64.0 tons Month 10: 71.0 tons Month 11: 78.0 tons | Title I Condition: Limit assumed in BACT analysis under 40 CFR Section 52.21(j) & Minn. R. 7007.3000 |
| Total Particulate Matter: less than or equal to 0.3 grains per dry standard cubic foot of exhaust gas, unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735 (significant emissions of total particulate matter are not expected from this operation) | Minn. R. 7011.0715, subp. 1(A) |
| Opacity: less than or equal to 20 percent opacity | Minn. R. 7011.0715, subp. 1(B) |
| B. RECORDKEEPING REQUIREMENTS | |
| Material Content: VOC contents in coating 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 |
| Daily Recordkeeping: Each operating day, record the quantity of VOC used (applied) in the 7L line. | Title I Condition: recordkeeping associated with limit assumed in BACT analysis under 40 CFR Section 52.21(j) & Minn. R. 7007.3000 |
| Monthly Recordkeeping: By the 15 th day of each month, calculate and record the total quantity of VOC emitted from the 7L line during the previous month and the previous 12 months. | Title I Condition: recordkeeping associated with limit assumed in BACT analysis under 40 CFR Section 52.21(j) & Minn. R. 7007.3000; 40 CFR Section 60.445(d); Minn. R. 7007.0800, subp. 4 and 5 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

3/2/2004 10:47 AM

Facility Name: 3M Hutchinson
 Permit Number: 08500049-010

| | |
|--|---|
| <p>The VOC emissions shall be calculated on a mass balance basis, except as noted below, assuming that the quantity of VOC emitted is equal to the quantity of VOC applied, determined as stated under the "Material Content" provision above.</p> <p>The Permittee may choose to perform stack testing for the purpose of determining an emission factor. Upon approval of the stack test and results by MPCA, the Permittee may use an emission factor derived from the stack test when calculating VOC emissions occurring while the 7L line is producing the same or similar product* tested to derive the emission factor. The stack test must measure VOC as VOC.</p> <p>(* "Same or similar product" includes products which use the same input materials but may be produced in different sizes.)</p> | <p>Minn. R. 7007.0800, subp. 4 and 5</p> |
| <p>Monthly Recordkeeping: For each calendar month, maintain a record of all coatings used and the calculated weighted average mass of VOC per mass of coating solids applied, calculated as follows:</p> $G = \frac{\sum_{i=1}^n W_{oi} M_{ci}}{\sum_{i=1}^n W_{si} M_{ci}}$ <p>where:</p> <p>G = the calculated weighted average mass (in kg) of VOC per mass (in kg) of coating solids applied during the calendar month</p> <p>W_{oi} = the weight fraction of organics applied of each coating (i) applied during the calendar month, as determined from Method 24 (<i>see note 1</i>) or the coating manufacturer's formulation data</p> <p>W_{si} = the weight fraction of solids applied of each coating (i) applied during the calendar month as determined from Method 24 (<i>see note 1</i>) or coating manufacturer's formulation data</p> <p>M_{ci} = the total mass (kg) of each coating (i) applied during the calendar month as determined from facility records.</p> | <p>Title I Condition: recordkeeping associated with BACT limit under 40 CFR Section 52.21(j); Minn. R. 7007.3000; 40 CFR Sections 60.444(a), 60.445(a), and 60.446(a)</p> |
| <p>Note 1: During times when the emission limits of NSPS Subpart RR do not apply (when the VOC input to the 7L line does not exceed 45 Mg (50 tons) per 12 consecutive months), an EPA-approved alternative to Method 24 may be used. However, when Subpart RR applies, no alternative method is allowed in the absence of written approval from EPA, specific to the 7L line, allowing an alternative method.</p> | <p>Minn. R. 7007.0800, subp. 4 and 5</p> |

TABLE B: SUBMITTALS

3/2/2004 10:47 AM

Facility Name: 3M Hutchinson
Permit Number: 08500049-010

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 amendment to:

Minnesota Pollution Control Agency
Air Quality Permit Document Coordinator
MAR/MAJ
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

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

Compliance Tracking Coordinator - Air Quality
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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

3/2/2004 10:47 AM

Facility Name: 3M Hutchinson
Permit Number: 08500049-010

| What to send | When to send | Portion of Facility Affected |
|---|--------------------------------|-------------------------------------|
| Initial Notification of applicability of 40 CFR Section 63, Subpart JJJJ, as described in 40 CFR Section 63.3400. | No later than December 4, 2004 | GP 001 |

TABLE B: RECURRENT SUBMITTALS

3/2/2004 10:47 AM

Facility Name: 3M Hutchinson
Permit Number: 08500049-010

| 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. | Total Facility |
| Emissions 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. | Total Facility |