

**AIR EMISSION PERMIT NO. 05300443- 001  
IS ISSUED TO**

**MINNESOTA DIVERSIFIED PRODUCTS INC.**  
9091 County Road 50  
Rockford, Hennepin County, MN 55373

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 Application Type	Application Date
Total Facility Operating Permit	06/14/1995
Supplement Submittal #1	07/05/2001
Supplement Submittal #2	08/02/2001
Supplement Submittal #3	08/23/2001
Supplement Submittal #4	10/09/2001

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

**Permit Type:** Federal; Part 70/Limits to Avoid NSR

**Issue Date:** March 4, 2002

**Expiration:** March 4, 2007  
All Title I Conditions do not expire.

---

Ann Foss, Manager  
Majors Air and Construction Section  
Majors and Remediation Division

for Karen A. Studders  
Commissioner  
Minnesota Pollution Control Agency

## **TABLE OF CONTENTS**

**Notice to the Permittee**

**Permit Shield**

**Facility Description**

**Table A: Limits and Other Requirements**

**Table B: Submittals**

**Appendix I: Insignificant Activities**

**Appendix II: Emissions Unit Description**

**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:**

Minnesota Diversified Products, Inc. (the Facility) manufactures rigid polystyrene boardstock by both foam extrusion and the Expandable Polystyrene (EPS) bead process. The Facility also manufactures custom-molded and custom-cut EPS foam parts, fabricates pre-manufactured urethane, fabricates and repairs equipment in a machine shop, and laminates other products onto foam products with hot-melt glues. The Facility has several smaller sources that qualify as insignificant activities under Minn. R. 7007.1300, subp. 3. These are described in Appendix I of this permit.

The main emissions are Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) from the various foam processes and small amounts of various other pollutants from the combustion of natural gas and distillate oil.

The Facility has received several air emissions permits from the MPCA since 1989. The Facility was permitted as a major source under the New Source Review (NSR) regulations (40 CFR § 52.21). This permit imposes limits on the Facility to avoid major source classification for NSR. However, the Facility is a major source under the federal operation permits program (40 CFR pt. 70) and the National Emissions Standards for Hazardous Air Pollutants (NESHAPs, 40 CFR pt. 63).

The permit contains requirements that limit emissions of VOCs and authorizes certain changes that can take place during the permit term: specifically, installation of two new shape molders and a pre-expander, as well as the modification or replacement of existing emissions units.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

03/04/02

Facility Name: Minnesota Diversified Products Inc

Permit Number: 05300443 - 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**

<b>What to do</b>	<b>Why to do it</b>
This permit establishes limits on the facility to keep it a minor source under New Source Review. The Permittee cannot make any change at the source that would make the source a major source under New Source Review until a permit amendment has been issued. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments.	Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Equipment Labeling and Inventory: The Permittee shall permanently affix a unique number to each emissions unit for tracking purposes. The numbers shall correlate the unit to the appropriate EU and GP numbers used in this permit. The number shall be affixed by placard, stencil, or other similar means, and shall be maintained so that they are readable and visible at all times from a safe distance.  The Permittee shall maintain a written list of all emissions units on site. The list shall correlate the units to the numbers used in this permit (EU and GP) and shall include the data from Appendix II of this permit. The Permittee shall update the list to include any new, replaced, or modified equipment prior to making the pre-authorized change.	Minn. R. 7007.0800, subp. 2
STANDARD REQUIREMENTS	hdr
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)
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)Monitoring
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)
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
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

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

03/04/02

Facility Name: Minnesota Diversified Products Inc

Permit Number: 05300443 - 001

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
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
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)
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
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)
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)
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)
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
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
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)
Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
The Permittee is required to submit a Risk Management Plan (RMP) under the federal rule, 40 CFR pt. 68. Each owner or operator of a stationary source, at which a regulated substance is present above a threshold quantity in a process, shall design and implement an accidental release prevention program. A complete RMP must be submitted to the RMP Reporting Center, PO Box 3346, Merrifield, VA 22116. RMP submittal information may be obtained at <a href="http://www.epa.gov/swercepp">http://www.epa.gov/swercepp</a> or by calling 1-800-424-9346. These requirements must be complied with no later than the latest of the following dates: (1) June 21, 1999; (2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or (3) The date on which a regulated substance is first present above a threshold quantity in a process.	40 CFR pt. 68

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

03/04/02

Facility Name: Minnesota Diversified Products Inc

Permit Number: 05300443 - 001

The facility currently uses ozone-depleting substances as defined in 40 CFR pt. 82. Sections 601-618 of the 1990 Clean Air Act Amendments and 40 CFR pt. 82 may apply to your facility. Read Sections 601-618 and 40 CFR pt. 82 to determine all the requirements that apply to your facility.	40 CFR pt. 82
--	---------------

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

03/04/02

Facility Name: Minnesota Diversified Products Inc

Permit Number: 05300443 - 001

**Subject Item: GP 001 Total Facility VOC Limits**

**Associated Items:** EU 001 Dingeldein Pre-Expander  
 EU 002 25" Block Mold  
 EU 003 31" Block Mold  
 EU 004 Tri-904 Pre-Expander (to be removed)  
 EU 005 Custom Shape Mold (205)  
 EU 006 Custom Shape Mold (206)  
 EU 007 48" Extruder  
 EU 008 24" Extruder  
 EU 011 Pre-Expander (new)  
 EU 012 Shape Mold Press (Proposed)  
 EU 013 24" Laminator  
 EU 015 New Shape Molder 1 (projected)  
 EU 016 New Shape Molder 2 (projected)

What to do	Why to do it
<b>LIMITS</b>	hdr
<p>Volatile Organic Compounds: less than or equal to 40,000 lbs/month using 12-month Rolling Average to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit.</p> <p>All emission units included in GP 001 as allowed in this permit shall be included in this calculation. VOC contents for each VOC-containing material shall be determined as described under the Material Content requirement in GP 001.</p>	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.3 grains/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. This applies separately to each emissions unit. None of these processes are expected to generate any particulate matter.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity . This applies separately to each emissions unit.	Minn. R. 7011.0715, subp. 1(B)
<b>MONITORING</b>	hdr
<p>Daily Recordkeeping.</p> <p>For VOC used in the EPS bead and extruded foam processes: On each day of operation, the Permittee shall maintain production records showing the amount of each VOC-containing material used. This shall be based on written usage logs and meter readings.</p> <p>For other VOC-containing materials: The Permittee shall calculate, maintain, and record monthly usage showing the quantity of each material used. This shall be based on either written usage logs or purchase/delivery records.</p>	Title I Condition: Monitoring for Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 and 5
<p>Monthly Recordkeeping -- VOC Emissions.</p> <p>By the 15th day of the month, the Permittee shall calculate and record the following:</p> <p>1) The total usage of VOC-containing materials for the previous calendar month using the daily and monthly usage records. This record shall also include the VOC and contents of each material as determined by the Material Content requirement of this permit.</p> <p>2) The VOC emissions, in pounds, for the previous month using the formula specified in this permit.</p> <p>3) The 12-month rolling average 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>	Minn. R. 7007.0800, subp. 4 and 5
<p>Monthly Calculation -- VOC Emissions. The Permittee shall calculate the Monthly Emissions Rate of VOC (MER) using the following equation:</p> $\text{MER (lbs/month)} = (A1 \times B1) + (A2 \times B2) + (A3 \times B3) \dots$ <p>where:        A# = amount of each VOC-containing material used (e.g., EPS bead, adhesive, etc.), in pounds/month;        B# = weight percent VOC in A#, as a fraction.</p>	Minn. R. 7007.0800, subp. 4 and 5



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

03/04/02

Facility Name: Minnesota Diversified Products Inc

Permit Number: 05300443 - 001

<p>Material Content of EPS Bead: The Permittee shall use the Certificate of Analysis (COA) provided by the supplier to determine the VOC content of each shipment. If a COA is not available, the Permittee shall use 7% for the VOC content. However, if in the preceeding 12 months, EPS bead with a content greater than 7% was used, then the Permittee shall assume that the VOC content is equivalent to the highest VOC content used in the preceeding 12 months.</p> <p>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.</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>Material Content of Other Materials: VOC contents in other 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.</p>	Minn. R. 7007.0800, subp. 4 and 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

03/04/02

Facility Name: Minnesota Diversified Products Inc  
Permit Number: 05300443 - 001

**Subject Item:** GP 002 New Equipment  
**Associated Items:** EU 011 Pre-Expander (new)  
EU 015 New Shape Molder 1 (projected)  
EU 016 New Shape Molder 2 (projected)

What to do	Why to do it
The Permittee is authorized to install and operate EUs 011, 015 and 016 at any time during the life of this permit. The units shall meet all the requirements of this permit (e.g., GP 001).	Title I Condition: Limit to avoid classification of changes as major modifications under 40 CFR Section 52.21 and Minn. R. 7007.3000

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/04/02

Facility Name: Minnesota Diversified Products Inc  
Permit Number: 05300443 - 001

- Subject Item:** GP 003 VOC Units Other Than Extrusion
- Associated Items:** EU 001 Dingeldein Pre-Expander  
EU 002 25" Block Mold  
EU 003 31" Block Mold  
EU 004 Tri-904 Pre-Expander (to be removed)  
EU 005 Custom Shape Mold (205)  
EU 006 Custom Shape Mold (206)  
EU 011 Pre-Expander (new)  
EU 012 Shape Mold Press (Proposed)  
EU 013 24" Laminator  
EU 015 New Shape Molder 1 (projected)  
EU 016 New Shape Molder 2 (projected)

What to do	Why to do it
<p>The Permittee may replace units listed in GP 003 with units of equivalent or lesser capacity, may modify listed units in GP 003 so long as they remain at equivalent or lesser capacity, or move existing emission units, provided that VOC emissions are tracked and calculated as specified in this permit under GP 001, and other permit conditions are met.</p> <p>If a proposed change triggers an applicable requirement that is not contained in this permit (e.g., 40 CFR pt. 63), the change must go through the appropriate procedure in Minn. R. ch. 7007.</p>	<p>Title I Condition: Limit to avoid classification of changes as major modifications under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

03/04/02

Facility Name: Minnesota Diversified Products Inc

Permit Number: 05300443 - 001

**Subject Item:** EU 009 Boiler 1**Associated Items:** SV 008 Boiler 1 Vent (207)

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input . The potential to emit based on equipment design and allowable fuels is 0.014 lb/MMBtu.	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0515, subp. 2
Sulfur Dioxide: less than or equal to 2.0 lbs/million Btu heat input . The potential to emit based on equipment design and allowable fuels is 0.51 lb/MMBtu.	Minn. R. 7011.0515, subp. 1
Distillate Oil, Sulfur Content of Fuel: less than or equal to 0.5 percent by weight	Minn. R. 7007.0800, subp. 2
Fuel Type: Natural Gas or No. 2 Fuel Oil only, by design.	Minn. R. 7005.0100, subp. 35a
Fuel Records:  1). The Permittee shall keep records of fuel purchases for the Facility on a monthly basis.  2). The Permittee shall obtain and maintain a certification from the fuel supplier for each fuel oil delivery specifying the sulfur content of the fuel oil, in percent by weight.	Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

03/04/02

Facility Name: Minnesota Diversified Products Inc

Permit Number: 05300443 - 001

**Subject Item:** EU 010 Boiler 2**Associated Items:** SV 009 Boiler 2 Vent (208)

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input . The potential to emit based on equipment design and allowable fuels is 0.014 lb/MMBtu.	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0510, subp. 2
Sulfur Dioxide: less than or equal to 2.0 lbs/million Btu heat input . The potential to emit based on equipment design and allowable fuels is 0.51 lb/MMBtu.	Minn. R. 7011.0510, subp. 1
Distillate Oil, Sulfur Content of Fuel: less than or equal to 0.5 percent by weight	Minn. R. 7007.0800, subp. 2
Fuel Type: Natural Gas or No. 2 Fuel Oil only, by design.	Minn. R. 7005.0100, subp. 35a
Fuel Records:  1). The Permittee shall keep records of fuel purchases for the Facility on a monthly basis.  2). The Permittee shall obtain and maintain a certification from the fuel supplier for each fuel oil delivery specifying the sulfur content of the fuel oil, in percent by weight.	Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

03/04/02

Facility Name: Minnesota Diversified Products Inc

Permit Number: 05300443 - 001

**Subject Item:** EU 014 Hot Wire Cutting Tables**Associated Items:** SV 012 Hot Wire Cutters

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 unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735. This applies separately to each piece of industrial process equipment.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity . This applies separately to each piece of industrial process equipment.	Minn. R. 7011.0715, subp. 1(B)

## TABLE B: SUBMITTALS

03/04/02

Facility Name: Minnesota Diversified Products Inc  
Permit Number: 05300443 - 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**

03/04/02

Facility Name: Minnesota Diversified Products Inc  
Permit Number: 05300443 - 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



**TABLE B: RECURRENT SUBMITTALS**

03/04/02

Facility Name: Minnesota Diversified Products Inc

Permit Number: 05300443 - 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
Annual Report	due 31 days after end of each calendar year following Permit Issuance. The Permittee shall submit an annual report by January 31 that describes the changes made at the facility during the previous calendar year using the latest MPCA application forms. The report shall document the VOC 12-month rolling average calculations for the previous calendar year and the equipment and stack changes that took place during the previous calendar year. The report shall be submitted with the annual Compliance Certification listed in Table B. As part of the Annual Report, the Permittee shall verify and certify that the facility has maintained minor source status for New Source Review.	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

**APPENDIX I**  
**Facility Name: Minnesota Diversified Products, Inc.**  
**Permit Number: 05300443-001**

### Insignificant Activities and General Applicable Requirements

The table below lists the insignificant activities that are currently at the Facility and their associated general applicable requirements.

<b>Minn. R. 7007.1300, subp.</b>	<b>Rule Description of the Activity</b>	<b>General Applicable Requirement</b>
3(D)(2)	Equipment venting PM/PM <sub>10</sub> inside a building, provided that emissions from the equipment are filtered through an air cleaning system and vented inside of the building 100% of the time. <i>MDP has EPS milling and cutting equipment that is controlled and vented internally.</i>	Minn. R. 7011.0715 (PM and opacity)
3(H)(4)	Brazing, soldering, or welding equipment.	Minn. R. 7011.0715 (PM and opacity)
3(H)(5)	Blueprint copiers and photographic processes;	Minn. R. 7011.0110 (opacity)
3(I)	Individual emissions units at a stationary source, each of which have a PTE of the following pollutants in amounts less than: 2 tpy of CO and 1 tpy each of NO <sub>x</sub> , SO <sub>2</sub> , PM/PM <sub>10</sub> , VOC, and ozone. <i>MDP has 18 natural gas space heaters and a printing operation that qualify under this subpart.</i>	Minn. R. 7011.0715 (PM and opacity) or Minn. R. 7011.0610 (PM and opacity)

Under Minn. R. 7007.1250, subp. 1(A), the Permittee may add insignificant activities to the stationary source throughout the term of the permit without getting permit amendments. Certain exclusions apply and are listed in Minn. R. 7007.1250, subp. 2. In addition, this permit specifically prohibits the Permittee from making any modifications that would make the source major under NSR. The following table is a listing of the insignificant activities that the Permittee is somewhat likely to add and their associated applicable requirements.

<b>Minn. R. 7007.1300, subp.</b>	<b>Rule Description of the Activity</b>	<b>General Applicable Requirement(s)</b>
3(A)	Fuel Use: space heaters fueled by kerosene, natural gas, or propane.	Minn. R. 7011.0515 (PM and opacity)
3(B)(1)	Infrared electric ovens	Minn. R. 7011.0110 (opacity)
3(H)(8)	Cleaning operations: alkaline/phosphate cleaners and associated cleaners and associated burners.	Minn. R. 7011.0610 + Minn. R. 7011.0715 (PM and opacity)

**APPENDIX II**  
**Facility Name: Minnesota Diversified Products, Inc.**  
**Permit Number: 05300443-001**

**Emission Unit Description from Delta**  
*paper copy only*

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**MINNESOTA DIVERSIFIED PRODUCTS INC.**  
**AIR EMISSION PERMIT NO. 05300443-001**

This technical support document is for all the interested parties of the permit and to meet the requirements that have been set forth by the federal regulations and Minn. R. (40 CFR, Section 70.7(a)(5) and Minn. R. 7007.0850, subp.1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the preliminary determination to issue the permit. There were no comments during the 30-day public notice. EPA contacted the MPCA on Feb. 19, 2002 (during the 45-day review period), to say that they had no comments as well.

**1. General Information**

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

Stationary Source/Address (SIC Code: 3086)
<b>Minnesota Diversified Products, Inc.</b>
9091 County Road 50
Rockford, Hennepin County, MN 55373
Steve Slavik, 763-477-5854

**1.2. Description of the Facility**

Minnesota Diversified Products, Inc. (MDP) manufactures rigid polystyrene boardstock by both foam extrusion and the expandable polystyrene (EPS) bead process. The EPS process results in emissions of pentane and combustion products from the boilers used to produce steam for the process. The extrusion process results in emissions of methyl chloride, HCFC 142b, and HCFC 22 which are used as blowing agents. MDP also fabricates pre-manufactured urethane, fabricates and repairs equipment in a machine shop, and laminates other products onto foam products with hot-melt glues. The Facility has several smaller sources that qualify as insignificant activities under Minn. R. 7007.1300, subp. 3. These are described in Section 3.5 of this TSD.

**1.3 Permit History**

In May of 1989, the Permittee was issued a total facility permit that permitted the operation of all activities at the site at that time. The permit contained federally enforceable usage limits (Title I Conditions) in order to keep VOC emissions less than 250 tons per year. This permit was amended three times between 1990 and 1993, but the original VOC permit limit remained.

In April of 1995, the Permittee was issued an amendment that was for an increase that made them a major source under New Source Review (40 CFR § 52.21). The increase was a minor modification. The permit was amended one more time after that date. So, as of April 1995, the Facility was permitted as a major source. The Permittee has stated that their actual emissions have exceeded the major source levels since 1995. See Attachment 4 of this TSD for a summary of previous air permits and actual emissions.

This permit will once again impose limits on the Facility to avoid major source classification under NSR. The Facility's actual emissions have been decreasing in the past three years and are currently under 200 tons per year of VOC. The Permittee also built a new facility at a different location (see Section 3.6 of this TSD for a discussion of that site), so some production has moved to that location. The Permittee has stated that they intend to remain below major source levels for the foreseeable future. The Permittee has been informed that if they apply for a permit amendment to become major during the life of this permit (i.e., next 5 years), and that modification is considered a minor modification (e.g., less than 250 tpy), the MPCA will investigate the proposal for evidence of circumvention.

#### 1.4 Description of Any Changes Allowed with this Permit Issuance

The permit pre-authorizes some new units as well as categories of modifications. Specifically, the Permittee may add a pre-expander and two shape molders as well as modify or replace certain existing equipment. See Section 3.1 of this TSD for further discussion.

#### 1.5. Facility Emissions

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

See Attachment 2 of this TSD for more specifics

Pollutant	Process Units (tpy)	Boilers and Hot Wire Cutters (tpy)	IAs (tpy)	Total Facility (tpy)
Particulate Matter (PM)	neg	32.7	7.5	40.2
PM less than 10 microns (PM <sub>10</sub> )	neg	32.24	7.5	39.7
Nitrogen Oxides (NO <sub>x</sub> )	0	8.9	0.083	8.99
Sulfur Oxides (SO <sub>x</sub> )	0	32.1	0.0	32.1
Volatile Organic Compounds (VOC)	240	0.327	3.63	244
Carbon Monoxide (CO)	0	4.99	0.07	5.06
HAP – Methyl Chloride	67.6	neg	neg	67.6
HAP – Styrene	5.98	neg	neg	5.98
HAP – Total	73.6	neg	neg	73.6
HCFCs	149	0	0	149

tpy = tons per year

neg. = negligible

**Table 2. Facility and Permit Classification**

Program	Major Source	*Synthetic Minor	*Minor
Prevention of Significant Deterioration		VOC	
Nonattainment Area Review	NA	NA	NA
Part 70 Permit Program	HAP, VOC		
Part 63 National Emissions Standards for Hazardous Air Pollutants (NESHAP)	X		

\* Refers to potential emissions that are less than those specified as major by 40 CFR § 52.21, 40 CFR pt. 51 Appendix S, 40 CFR pt. 70, and 40 CFR pt. 63.

## 2. Regulatory and/or Statutory Basis

The Facility has taken limits to avoid major source classification for New Source Review (40 CFR § 52.21), but is a major source under the federal operating permits program (40 CFR pt. 70) and the NESHAP program (40 CFR pt. 63). The Facility will be subject to any applicable NESHAPs, once promulgated. At this time, none of the listed source categories seem to cover the rigid closed-cell foam extrusion process. EPA has been notified of this.

See Attachment 1 of this TSD for the specific permit limits and their basis (Form CD-01).

**Table 3. Regulatory Overview of Facility**

Level*	Applicable Regulations	Comments:
GP 001 (Total Facility VOC Limits)	40 CFR § 52.21  Minn. R. 7011.0715	Prevention of Significant Deterioration (PSD). Limits taken to avoid major source and modification classification under PSD for all noncombustion emissions of VOC. It is a rolling limit due to substantial and unpredictable variations in operation. This permit pre-authorizes the replacement and modification of the listed units. All emissions are tracked under the cap.  Standards of Performance for Post 1969 Industrial Process Equipment. This applies to all units in GP 001, individually.
GP 002 (New Units)	40 CFR § 52.21	PSD. This permit pre-authorizes the installation of 3 new emissions units under the VOC cap.
GP 003 (VOC Units other than Extrusion)	40 CFR § 52.21	PSD. This permit pre-authorizes the replacement of emissions units with similar units, and the modification of existing units, so long as the permit limits are met.
EU 009	Minn. R. 7011.0515  Minn. R. 7007.0800, subp. 2	Minnesota Standard of Performance for New Indirect Heating Units. Fuel limited to natural gas and No. 2 fuel oil.  Sulfur content of fuel oil limited to 0.5% by weight.
EU 010	Minn. R. 7011.0510  Minn. R. 7007.0800, subp. 2	Minnesota Standard of Performance for Existing Indirect Heating Units. Fuel limited to natural gas and No. 2 fuel oil.  Sulfur content of fuel oil limited to 0.5% by weight.
EU 014	Minn. R. 7011.0715	Standards of Performance for Post 1969 Industrial Process Equipment.

\*Level -- EU = emission unit, GP = group, TF = total facility

## 3. Technical Information

### 3.1. Pre-authorized Changes

As briefly described earlier, the permit pre-authorizes certain changes that might otherwise be considered modifications under state and federal rules. The permit allows the Permittee to replace certain existing emissions units with similar or like-kind units as long as no new applicable requirements are triggered and as long as emissions are tracked and calculated as specified in the permit. In addition, the permit authorizes the installation of 3 new units.

The permit sets 12-month rolling limits on VOC emissions, so annual VOC emissions cannot increase due to any of the pre-authorized changes. All applicable requirements and necessary monitoring are in the permit. The replacement of existing units with similar technology and capacity units, and the changing or modification of existing units as specified in the permit, will not cause an emissions increase; so they are not modifications and can be made without the need for an amendment.

While the permit allows the replacement of certain equipment, it does not allow any changes that would trigger a new applicable requirement not contained in the permit. Currently, because this source does not yet have a promulgated Part 63 NESHAP, one type of change that would require a permit amendment would be one that had HAP emissions increases that triggered 112(g) (under 40 CFR §§ 63.40 through 63.44 and Minn. R. 7007.3010). The only operation at the Facility that emits significant HAPs is one of the extruders. The permit does not pre-authorize any modifications or replacements of these units; therefore, the pre-authorized changes are not likely to trigger 112(g).

When an emissions cap is put in a permit and changes are pre-authorized, it is sometimes necessary to put in a limit to avoid a mandatory Environmental Assessment Worksheet (EAW) under Minn. R. 4410.4300. For this case, the Facility's actual emissions are around 200 tons per year. With a cap of roughly 240 tpy, any of the authorized modifications would have increases less than 100 tpy, so a mandatory EAW would not be triggered. Per MPCA guidance, a limit to avoid an EAW is not needed.

### **3.2. Potential to Emit Calculations**

Attachment 2 of this TSD contains detailed spreadsheets and supporting information prepared by the Permittee with a summary sheet prepared by the MPCA.

#### **EPS Bead Processes**

These operations consist of the pre-expanders, molders, and storage. The majority of VOC is lost during pre-expansion (43%) and molding (42%) per EPA 450/3-90-020. The remaining 15% is lost during final product storage and after the product leaves the facility. Since it is unknown how long it takes for the remaining 15% to evaporate, it is assumed that it all is emitted at the Facility.

#### **Extrusion**

One of the extruders uses a VOC that is also a HAP. The VOC/HAP used is assumed to be 100% emitted. A mass balance is used. Both extruders also use HCFC's. For the HCFCs, PTE calculations are based on EPA document 450/3-90-020. This document is consistent with other EPA procedures used for filing the Form R report under the Toxics Release Inventory requirements in that it allows a 16% emissions factor.

#### **Laminator**

The PTE calculations are based a mass balance assuming 100% of the VOC/HAP is emitted.

**Boilers**

The PTE calculations are based on EPA approved emissions factors from AP-42, the fuels burned, and the boiler capacities.

**Hot Wire Cutters**

The PTE calculations are based on the historical material collected from these operations.

**3.3. Permit Calculations**

Section 3.4 of this TSD explains the various monitoring required by the permit. For the VOC limit, this includes calculating actual emissions on a monthly basis.

**Calculation of VOC emissions**

Total VOC emissions must each be calculated monthly using the following equation:

$\text{MER} = (\text{A1} \times \text{B1}) + (\text{A2} \times \text{B2}) + (\text{A3} \times \text{B3}) + \dots$
---

Where:

MER = the monthly VOC emissions, in pounds/month

A# = the amount of each VOC-containing material used in the previous month (e.g., EPS bead, adhesive, etc.), in pounds.

B# = the weight percent of VOC in A#, as a fraction. For example, if a material were 50% by weight VOC, this would be 0.50.

**3.4. Periodic Monitoring**

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements. In evaluating the monitoring included in the permit, the MPCA considered the following:

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

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



**Table 4. Emission Units Subject to Periodic Monitoring**

EU/ GP/ CE	Emission limit (Basis)	Additional Monitoring	Discussion
Total Facility	Ozone-depleting substances (ODS) requirements of 40 CFR pt. 82  Risk Management Plan under 40 CFR pt. 68	none  none	The ODS rules are enforced by EPA. Because the ODS rules are defined as an applicable requirement by Part 70 regulations, the MPCA is required to include a statement in the permit if these rules apply, but the MPCA does not interpret or enforce these rules.  This too is an applicable requirement that is enforced by EPA.
VOC Limits: GP 001	VOC $\leq$ 40,000 pounds per month, using a 12-month rolling average (limit to avoid NSR)  PM: variable, depending on airflow  Opacity: $\leq$ 20 % (Minn. R. 7011.0715)	Recordkeeping: Daily records of EPS and extrusion materials; On-going MSDS records of coating content; Monthly calculations of emissions.  None	Records can be generated on a daily basis for the EPS Bead and extrusion processes, based on meter readings and written production logs. The remaining materials (e.g., adhesives) are very low volume and will be based on monthly usage records.  Most of these units are not reasonably expected to generate particulate matter; therefore, it is highly unlikely that they could violate the applicable requirement.
GP 002: New Units	Installation of New Equipment	Record of new unit parameters, reported annually	All new units must meet all the applicable requirements in the permit.
GP 003: VOC Emitting Units Other Than Extrusion	Replacement of emissions units with similar units + modifications to existing units	On-going record of any equipment that is replaced	Any replaced equipment must meet all the applicable requirements in the permit. If a changed unit would trigger a different requirement, the change cannot be made without an amendment. In addition, emissions must be tracked and calculated as required by the permit.  The permit also requires labeling and inventorying of all units (at TF level).
EUs 009, Boiler	PM: $\leq$ 0.4 lb/MMBtu SO <sub>2</sub> $\leq$ 2.0 lb/MMBtu Opacity: $\leq$ 20 % (Minn. R. 7011.0515)	None	Boiler uses natural gas with No. 2 Fuel Oil as backup; therefore, the likelihood of violating either of the emission limits is very small. The Permittee can demonstrate that these units will continue to operate such that emissions are well below the emission limits by burning only these fuels. PTE using AP-42: PM is 0.014 compared to the rule limit of 0.4 lb/MMBtu and SO <sub>2</sub>

EU/ GP/ CE	Emission limit (Basis)	Additional Monitoring	Discussion
			is 0.51 vs. 2.0 lb/MMBtu.
	Fuel limited to natural gas and No. 2 Fuel Oil, by design  Sulfur Content of Fuel Oil $\leq 0.5\%$ by weight	Fuel purchase records.  Fuel certification	Distillate fuel oil is oil that meets ASTM D396-78. The ASTM definition requires sulfur $< 0.5\%$ ; therefore, the likelihood of the violating this limit is very small. Fuel certification records are adequate for periodic monitoring.
EU 010, Boiler	PM: $\leq 0.4$ lb/MMBtu SO <sub>2</sub> $\leq 2.0$ lb/MMBtu Opacity: $\leq 20\%$ (Minn. R. 7011.0510)  Fuel limited to natural gas and No. 2 Fuel Oil, by design  Sulfur Content of Fuel Oil $\leq 0.5\%$ by weight	None  Fuel purchase records.  Fuel certification	Boiler uses natural gas with No. 2 Fuel Oil as backup; therefore, the likelihood of violating either of the emission limits is very small. The Permittee can demonstrate that these units will continue to operate such that emissions are well below the emission limits by burning only these fuels. PTE using AP-42: PM is 0.014 compared to the rule limit of 0.4 lb/MMBtu and SO <sub>2</sub> is 0.51 vs. 2.0 lb/MMBtu.  Distillate fuel oil is oil that meets ASTM D396-78. The ASTM definition requires sulfur $< 0.5\%$ ; therefore, the likelihood of the violating this limit is very small. Fuel certification records are adequate for periodic monitoring.
EU 014, Hot Wire Cutters	PM: variable, depending on airflow  Opacity: $\leq 20\%$ (Minn. R. 7011.0715)	None	Based on PTE calculations submitted by the Permittee, it is highly unlikely that they could violate the applicable requirement. In addition, this operation is vented into the general building area so testing is not feasible.

### 3.5. Definition of Stationary Source

The Permittee applied for and received a permit for a new facility in 1999. That facility, known as the West facility, is considered a separate stationary source under all air permitting rules. While the facilities are under common ownership and have the same primary SIC code, they are not on contiguous property. The West facility is located approximately 2 miles from the main facility. In addition, the Permittee has stated that they do not support each other – products are not manufactured at one facility and then further manufactured at the other. Each facility is a stand-alone manufacturing plant.

### 3.6. Insignificant Activities

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. 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 2 of this TSD for PTE information for the insignificant activities.

**Table 5. Insignificant Activities**

Insignificant Activity	Currently on site? (Y/N)	General Applicable Emission limit	Discussion
Fuel use: space heaters fueled by, kerosene, natural gas, or propane.	N	PM $\leq$ 0.4 lb/MMBtu Opacity $\leq$ 20 % SO <sub>2</sub> < 4 lb/MMBtu (Minn. R. 7011.0515)	For these units based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units would be operated and vented inside a building, so testing for PM or opacity is not feasible.
Infrared electric ovens	N	Opacity $\leq$ 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 vented directly into the building, so testing is not feasible.
Processing operations that are controlled and vented inside 100% of the time	Y	PM, variable depending on airflow Opacity $\leq$ 20% (Minn. R. 7011.0715)	For these units, based on control equipment performance, it is highly unlikely that they could violate the applicable requirement. In addition, these units are operated and vented inside a building, so testing for PM or opacity is not feasible.
Brazing, soldering or welding equipment	Y	PM, variable depending on airflow Opacity $\leq$ 20% (Minn. R. 7011.0715)	For these units, based on EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are operated and vented inside a building, so testing for PM or opacity is not feasible.

Insignificant Activity	Currently on site? (Y/N)	General Applicable Emission limit	Discussion
Blueprint copiers and photographic processes	Y	Opacity $\leq$ 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.
Cleaning operations: alkaline/phosphate cleaners and associated cleaners and associated burners	N	PM, variable depending on airflow Opacity $\leq$ 20% (Minn. R. 7011.0610 + Minn. R. 7011.0715)	For these units, there are some factors available for the burners, but very little information regarding the cleaning operation itself. However, based on general knowledge of how they operate, it is highly unlikely that they could violate the applicable requirement or that testing would be feasible.
Individual emissions units, each of which have a potential to emit the following pollutants in amounts less than:  1. 2 tpy of CO; and 2. 1 tpy each of NO <sub>x</sub> , SO <sub>2</sub> , PM/PM <sub>10</sub> , and VOC (including HAP – containing VOC)	Y	PM, variable depending on airflow Opacity $\leq$ 20% (Minn. R. 7011.0715)	These are 18 small natural gas units, a printing operation, and two pressurized tanks. The printing operation and tanks are not expected to generate particulate matter. For the natural gas units, based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, all of these units are operated and vented inside a building, so testing for PM or opacity is not feasible.

### 3.7 Deviations from Delta Guidance

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. One item that deviates from guidance is the listing of certain applicable requirements at the group level even though they apply at the individual unit or control device. Specifically, the Industrial Process Equipment Rule is listed at GP 001. These units by design are not expected to generate particulate matter; therefore, it is nearly impossible for them to violate the limits. It is highly unlikely that the MPCA would need to track noncompliance with these limits at the individual unit level.

Another area where this permit deviates slightly from Delta guidance is in the use of appendices. While appendices are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be tracked (e.g., limits, submittals, etc.), should be in Table A or B. The main reason for not putting limits in appendices is that they are word processing sections and are not part of the tracking system.

Appendix I is a listing of the Facility's Insignificant Activities and their applicable requirements. This is a fairly standard way to include these in the permit, since it is highly unlikely the MPCA would need to have these as trackable items in the Delta database.

Appendix II is a printout from Delta of the emissions unit and control equipment descriptions, Forms GI-05A and GI-05B. This documents the correlation of specific emissions units to specific control equipment. Delta does not show this data as part of the “associated items” in Tables A and B of the permit, so this is a streamlined way to document this for the Permittee.

#### **4. Conclusion**

Based on the information provided by the Minnesota Diversified Products, Inc., the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 05300443-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team:

Permit Engineer: Peggy Bartz

Enforcement Staff: Rhonda Land

#### **Attachments**

- |   |   |
|---|---|
| 1 | Form CD-01 (Compliance Plan)                |
| 2 | MPCA and Permittee’s Emissions Calculations |
| 3 | Facility Description from Delta             |
| 4 | Air Permit History and Actual Emissions     |

**ATTACHMENT 1**  
**COMPLIANCE PLAN**  
**(Form CD-01, paper copy only)**



**ATTACHMENT 2**  
**EMISSIONS CALCULATIONS**





**Attachment 2**  
**MDP**  
**Potential to Emit**

This attachment contains the following spreadsheets:

<b>Title</b>	<b>Description</b>
PTE Summary	Summary of all pollutant PTEs from all spreadsheets.
EPS Processes and Extrusion	Tables showing the VOC and HAP PTEs from these operations.
Extrusion, Laminator, and Hot Wire Cutters	PTE calculations for HCFC from the extrusion process, as well as the laminator and hot wire cutters using mass balance.
Allowable Emissions (PM)	Spreadsheet showing the allowable emissions from Minnesota rules.
Boilers	PTE calculations using AP-42 factors.
Insignificant Activities	PTE calculations as needed for these units.
Permittee's Calculations	Copies of parts of the permit application and MPCA memos (paper copy only).



**ATTACHMENT 3**  
**FACILITY DESCRIPTION FROM DELTA**  
**(paper copy only)**



**ATTACHMENT 4**  
**AIR PERMIT HISTORY AND ACTUAL EMISSIONS**



**MINNESOTA DIVERSIFIED PRODUCTS  
AIR PERMIT HISTORY**

Permit Number	Permit Type	Issuance Date	Activity	Limits	Increase	Conclusion
2273-89-OT-1	Total facility operating permit	May 25, 1989	operation of facility	Industrial process equipment rule, indirect heating rule; EPS bead – 527,083 lb/month (rolling), & Methyl chloride – 12, 500 lb/month (rolling)	No increase – synthetic minor limits to avoid NSR major source threshold	Throughput limit replaced by later amendment, Minnesota rule limits need to be carried forward.
Amendment 1 to 2273-89-OT-1	Minor Amendment	April 18, 1990	Add a unit under the cap – should've required public notice	no new limits	none documented	NA
Amendment 2 to 2273-89-OT-1	Administrative Amendment	May 10, 1990	Revised the description of the unit added in amendment No. 1	no new limits	none	NA
Amendment 3 to 2273-89-OT-1	Administrative Amendment	Dec. 4, 1993	Expanded the monitoring and changed the limit format (equation added)	VOC = 41, 500 lb/month (combined EPS and methyl chloride)	none	This limit will be replaced by new cap.
Amendment 4 to 2273-89-OT-1	Major Amendment	April 1, 1995	Took a unit out of the cap (pre-expander) and gave it a separate limit to avoid EAW.	VOC = 15, 900 lb/month, if increase within 3 years, do an EAW	95.4 tpy, total PTE now 346 tpy (SO <sub>x</sub> 124.6)	More than 3 years have passed, so this can now be deleted and just put under the new cap.
2273-98-I/O-1 (05300443-006)	Minor Amendment	July 7, 1998	Modify an extruder covered by 249 tpy cap.	no changes to limits	TSD contains explanation that the increase was on 27 tpy (but calculation method not standard procedure).	This was inappropriate netting (based on current policy), and it should've required a public notice. However, since the source will now be minor, this is resolved.