

AIR EMISSION PERMIT NO. 05301088- 002

IS ISSUED TO

DOUGLAS CORPORATION

9600 Valley View Road
Eden Prairie, Hennepin County, MN 55344

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	November 1, 1999
Supplemental Submittal #1	March 16, 2000
Supplemental Submittal #2	February 6, 2001
Supplemental Submittal #3	February 8, 2001
Supplemental Submittal #4	March 1, 2001
Major Amendment	May 9, 2003

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 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 24, 2001
Expiration: July 24, 2006
All Title I Conditions do not expire.

Major Amendment
Issue Date: November 20, 2003

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

for Sheryl A. Corrigan
Commissioner
Minnesota Pollution Control Agency

CDT:lh

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NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

Douglas Corporation (Facility) is a manufacturer of plastic product identifiers (Standard Industrial Classification Code 3082), including nameplates, decals, and decorative trim. Its clients primarily include automobile and large equipment manufacturers. The Facility consists of spray coating booths, a roll coater, screen presses, pad printing, storage silos, grinding, and small natural gas combustion sources (e.g., cure ovens, etc.). The Facility also has several activities that qualify as insignificant activities under Minn. R. 7007.1300, subp. 3 (see Appendix II to the permit).

The Facility has taken limits to avoid major source classification for New Source Review (40 CFR § 52.21). 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 also contains certain limits carried over from a Stipulation Agreement dated

April 23, 2001. These limits cannot be amended.

The permit contains requirements that limit emissions of Volatile Organic Compounds, Hazardous Air Pollutants, and Particulate Matter and Particulate Matter less than 10 microns (PM/PM₁₀). The permit also contains requirements to control PM/PM₁₀ emissions from the spray booths and grinders.

AMENDMENT NO. 1 DESCRIPTION:

Amendment No. 1 (Air Emission Permit No. 05301088-002) allows for the installation and operation of a paint booth (EU 058, Booth 317). Booth 317 (formerly EU 016) is an existing booth which was removed to allow for the installation of the Robotic Paint Booth (EU 057). The permit allows for the replacement of booths; however, re-installation of the replaced booth (i.e., a net increase of one booth at the facility) requires a major amendment to the permit so that it is included under the total facility emissions cap.

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

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

Subject Item:	Total Facility
What to do	Why to do it
This permit establishes limits on the facility to keep it a minor source under New Source Review. The Permittee shall not 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. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments.	Title I Condition: Limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall not use any Methyl Ethyl Ketone in paint thinners and/or clean up solvents. A Material Safety Data Sheet (or equivalent) shall be kept for each material used.	Stipulation Agreement Dated April 20, 2001
Parts Recordkeeping. The Permittee shall keep documentation on-site for all plastic parts coated that demonstrate whether or not the parts will be used in business machines as defined in 40 CFR pt. 60, subp. TTT (e.g., product code, client name/ID, etc.).	Minn. R. 7007.0800, subp. 4 and 5
The Permittee shall not begin construction of any single project or projects that are connected or phased which will cause a total increase in actual emissions of greater than 99 tons per year for any criteria pollutant without first getting a permit amendment to authorize the project. Connected and phased have meanings as defined in Minn. R. 4410.0200 subps. 9b and 60. The Permittee shall not begin construction of any other project which is listed in Minn. R. 4410.4300 or Minn. R. 4410.4400 without first getting a permit amendment to authorize the project. Such projects may require the completion of an Environmental Assessment Worksheet or an Environmental Impact Statement prior to the amendment being issued. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 4410.4300 and Minn. R. 4410.4400
Emissions Unit Labeling: The Permittee shall permanently affix a unique number to each emissions unit for tracking purposes. The number shall correlate the unit to the appropriate EU and GP number used in this permit. The number can be affixed by placard, stencil, or other means. The number shall be maintained so that is is readable and visible at all times from a safe distance.	Minn. R. 7007.0800, subp. 2
Equipment Inventory List: The Permittee shall maintain a written list of each emissions unit on site. The list shall include the type of equipment, manufacturer and model number (if available), unique ID number (assigned and affixed as required by this permit), the corresponding control equipment number used to control the unit (if applicable), and dates of installation, modification, and construction. For paint booths, the list shall also include the type of coating (finish on non-finish), spray technology, the manufacturer specified transfer efficiency, the capture efficiency of the booth (100% or 80%), and the spray capacity in gal/hr. The Permittee shall update the list to include any replaced, modified, or changed equipment prior to making the pre-authorized change. For equipment that is replaced, modified or changed, the Permittee shall complete an evaluation as detailed below and shall include a record of the evaluation as part of the equipment list.	Minn. R. 7007.0800, subp. 2
Equipment Inventory continued: Prior to making the change, the Permittee shall determine and keep a record of the following: 1). Evaluate whether the permit contains all applicable requirements that would apply to the planned change; and 2). Re-evaluate whether the facility will continue to comply with all permit limits (e.g., 100 tpy VOC limit, 50 tpy PM/PM10 limits, Minn. R. ch. 7011 standard, etc.). If the answer to either of these is "no", the Permittee shall apply for and obtain the appropriate permit amendment as required by Minn. R. ch. 7007. These rule requirements may require that the permit amendment be issued prior to making the proposed change.	Minn. R. 7007.0800, subp. 2
STANDARD REQUIREMENTS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie

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<p>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.</p>	<p>Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)</p>
<p>Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.</p>	<p>Minn. R. ch. 7017</p>
<p>Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>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.</p>	<p>Minn. R. 7011.0020</p>
<p>Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3.</p> <p>At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.</p>	<p>Minn. R. 7019.1000, subp. 3</p>
<p>Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.</p> <p>At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.</p>	<p>Minn. R. 7019.1000, subp. 2</p>
<p>Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.</p>	<p>Minn. R. 7019.1000, subp. 1</p>
<p>Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description:</p> <ol style="list-style-type: none"> 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation. 	<p>Minn. R. 7019.1000, subp. 1</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 4</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie

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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: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
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.	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

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

Subject Item: GP 001 Total Facility VOC and PM Limits

- Associated Items:**
- EU 004 Paint Booth (325)
 - EU 005 Paint Booth (324)
 - EU 006 Paint Booth (322)
 - EU 007 Paint Booth (323)
 - EU 008 Paint Booth (321)
 - EU 009 Paint Booth (320)
 - EU 010 Paint Booth (319)
 - EU 011 Paint Booth (318)
 - EU 012 Paint Booth (315)
 - EU 013 Paint Booth (314)
 - EU 014 Paint Booth (313)
 - EU 015 Paint Booth (316)
 - EU 017 Paint Booth (312)
 - EU 019 Paint Booth (311)
 - EU 020 Paint Booth (301)
 - EU 021 Paint Booth (302)
 - EU 022 Paint Booth (303)
 - EU 023 Paint Booth (304)
 - EU 024 Paint Booth (305)
 - EU 025 Paint Booth (306)
 - EU 026 Paint Booth (307)
 - EU 027 Paint Booth (308)
 - EU 028 Paint Booth (309)
 - EU 029 Paint Booth (310)
 - EU 030 Roller Coater
 - EU 031 Screen Press (470)
 - EU 032 Screen Press (452)
 - EU 034 Screen Press (455)
 - EU 035 Screen Press (451)
 - EU 036 Screen Press (406)
 - EU 038 Screen Press (453)
 - EU 047 Pad Printing Machine No. 226
 - EU 048 Pad Printing Machine No. 230
 - EU 050 Pad Printing Machine No. 229
 - EU 052 Pad Printing
 - EU 057 Robotic Paint Booth
 - EU 058 Paint Booth (317)

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
Volatile Organic Compounds: less than or equal to 100.0 tons/year using 12-month Rolling Sum to be calculated by the 10th day of each month for the previous 12-month period as described later in this permit. All emission units in GP 001 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.	Title I Condition: Limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Stipulation Agreement dated April 20, 2001

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

<p>Particulate Matter < 10 micron: less than or equal to 50.0 tons/year using 12-month Rolling Sum to be calculated by the 10th day of each month for the previous 12-month period as described later in this permit. All emission units in GP 001 shall be included in this calculation. All particulate matter shall be conservatively assumed to be particulate matter less than 10 microns.</p> <p>Solids contents for each material shall be determined as described under the Material Content requirement in GP 001.</p>	<p>Title I Condition: Limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Stipulation Agreement dated April 20, 2001</p>
<p>Pre-Authorized Changes: The Permittee may modify or change the units listed in GP 001, and may replace listed emission units with emission units similar to those listed in GP 001, provided VOC and PM/PM10 emissions are tracked and calculated as specified in this permit. Specifically, the Permittee may replace or change paint booths, roller coaters, screen presses, and pad printers.</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 as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>
<p>MONITORING AND RECORDKEEPING</p>	<p>hdr</p>
<p>Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain the total quantity of each coating and other VOC and solids-containing materials used at the facility (e.g., 50 gallons of coating A). This shall be based on either written usage logs or records of material deliveries.</p>	<p>Title I Condition: Monitoring for Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Monthly Recordkeeping. By the 10th of the month, the Permittee shall calculate and record the following:</p> <ol style="list-style-type: none"> 1) The total usage of each solids and VOC-containing material for the previous calendar month using the daily usage records. This record shall also include the VOC and solids contents of each material as determined by the Material Content requirement of this permit. 2) The VOC and PM/PM10 emissions for the previous month using the formulas specified in this permit. 3) The 12-month rolling sum VOC and PM/PM10 emissions for the previous 12-month period by summing the monthly VOC and PM/PM10 emissions data for the previous 12 months. 	<p>Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Monthly Calculation -- VOC Emissions. The Permittee shall calculate VOC emissions using the following equations:</p> $\text{VOC (tons/month)} = V - W$ $V = (A1 \times B1) + (A2 \times B2) + (A3 \times B3) + \dots$ $W = (C1 \times D1) + (C2 \times D2) + C3 \times D3) + \dots$ <p>where: 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>Monthly Calculation -- PM/PM10 Emissions. The Permittee shall calculate PM/PM10 emissions from the spray booths using the following equations:</p> $B = G \times (1-CE) \times (1-TE)$ $G = (H1 \times J1) + (H2 \times J2) + (H3 \times J3) + \dots$ <p>where: B = total PM/PM10 emissions in tons/month. G = total solids used in pounds/month; CE = overall control efficiency, as a fraction. This shall be 0.74; TE = transfer efficiency, as a fraction, as defined in this permit. This shall be 0.75, unless otherwise approved by the MPCA in writing. H# = amount of each solids-containing material sprayed, in pounds/month; and J# = weight percent solids in H#, as a fraction.</p> <p>If different spray booths have different approved transfer efficiencies, the calculation shall be completed separately for each type of booth and then summed to obtain the total PM/PM10 emissions.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

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<p>Material Content: VOC and Solids (PM and PM<10 microns) contents in all materials shall be determined by the Material Safety Data Sheet (MSDS) or Certificate of Analysis (COA) provided by the supplier for each material used. If a material content range is given on the MSDS or COA, the highest number in the range shall be used in all permit calculations for GP 001. When using the MSDS or COA 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 and solids contents. The Commissioner reserves the right to require the Permittee to determine the VOC and solids contents of any material, according to EPA and ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the MSDS or COA.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Waste Credit: If the Permittee elects to obtain credit for VOC shipped in waste materials, the Permittee shall either use item 1 or 2 to determine the VOC content for each credited shipment.</p> <ol style="list-style-type: none">1) The Permittee shall analyze a composite sample of each waste shipment to determine the weight content of VOC, excluding water.2) The Permittee may use supplier data (e.g., MSDS) for raw materials to determine the VOC content of each waste shipment, using the same content data used to determine the content of raw materials. If the waste contains several materials, the content of mixed waste shall be assumed to be the lowest VOC content of any of the materials.	<p>Minn. R. 7007.0800, subp. 4 and 5</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

Subject Item: GP 002 Panel Filters

- Associated Items:**
- CE 001 Mat or Panel Filter
 - CE 002 Mat or Panel Filter
 - CE 003 Mat or Panel Filter
 - CE 004 Mat or Panel Filter
 - CE 005 Mat or Panel Filter
 - CE 006 Mat or Panel Filter
 - CE 007 Mat or Panel Filter
 - CE 008 Mat or Panel Filter
 - CE 009 Mat or Panel Filter
 - CE 010 Mat or Panel Filter
 - CE 011 Mat or Panel Filter
 - CE 012 Mat or Panel Filter
 - CE 013 Mat or Panel Filter
 - CE 014 Mat or Panel Filter
 - CE 015 Mat or Panel Filter
 - CE 016 Mat or Panel Filter
 - CE 017 Mat or Panel Filter
 - CE 018 Mat or Panel Filter
 - CE 019 Mat or Panel Filter
 - CE 020 Mat or Panel Filter
 - CE 021 Mat or Panel Filter
 - CE 022 Mat or Panel Filter
 - CE 023 Mat or Panel Filter
 - CE 024 Mat or Panel Filter
 - CE 025 Mat or Panel Filter
 - CE 029 Mat or Panel Filter

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
The Permittee shall operate and maintain each panel filter such that it achieves a control efficiency, for Total Particulate Matter: greater than or equal to 74 percent control efficiency	Title I Condition: Limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Stipulation Agreement dated April 20, 2001
The Permittee shall operate and maintain each panel filter such that it achieves a control efficiency, for Particulate Matter < 10 micron: greater than or equal to 74 percent control efficiency	Title I Condition: Limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Stipulation Agreement dated April 20, 2001
The Permittee shall operate and maintain each particulate filter any time the respective process equipment (see GP 003) is in operation.	Title I Condition: Limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Operation and Maintenance of Filters: The Permittee shall operate and maintain each filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of O & M Plan available onsite for use by staff and review by MPCA staff.	Minn. R. 7007.0800, subp. 14
MONITORING AND RECORDKEEPING	hdr
Daily Inspections: Once each day of operation, the Permittee shall visually inspect the condition of each panel filter with respect to alignment, saturation, tears, holes and any other matter that may affect the filter's performance. The Permittee shall maintain a daily written record of filter inspections.	Title I Condition: Limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Periodic Inspections: The Permittee shall inspect the control equipment components as required by the manufacturer's specifications. The frequency of the inspections shall be specified in the O & M Plan. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 2, 5 and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

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<p>Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the 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. 2, 5 and 14</p>
<p>Hood Certification: Each control device hood must conform to the requirements listed in Minn. R. 7011.0070, subp. 1, and the Permittee shall certify this for each hood as specified in Minn. R. 7011.0070, subp. 3. The Permittee shall maintain a copy of each certification on site, as well as an annual record of fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method.</p>	<p>Minn. R. 7007.0800, subp. 2 and 14</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

Subject Item: GP 003 Spray Booths

- Associated Items:**
- EU 004 Paint Booth (325)
 - EU 005 Paint Booth (324)
 - EU 006 Paint Booth (322)
 - EU 007 Paint Booth (323)
 - EU 008 Paint Booth (321)
 - EU 009 Paint Booth (320)
 - EU 010 Paint Booth (319)
 - EU 011 Paint Booth (318)
 - EU 012 Paint Booth (315)
 - EU 013 Paint Booth (314)
 - EU 014 Paint Booth (313)
 - EU 015 Paint Booth (316)
 - EU 017 Paint Booth (312)
 - EU 019 Paint Booth (311)
 - EU 020 Paint Booth (301)
 - EU 021 Paint Booth (302)
 - EU 022 Paint Booth (303)
 - EU 023 Paint Booth (304)
 - EU 024 Paint Booth (305)
 - EU 025 Paint Booth (306)
 - EU 026 Paint Booth (307)
 - EU 027 Paint Booth (308)
 - EU 028 Paint Booth (309)
 - EU 029 Paint Booth (310)
 - EU 057 Robotic Paint Booth
 - EU 058 Paint Booth (317)

What to do	Why to do it
<p>Operating Scenarios. The Permittee is authorized to change any of their existing paint booths such that they become affected facilities under 40 CFR pt. 60, subp. TTT (NSPS for surface coating of plastic parts for business machines). All booths must operate in compliance with all permit limits (e.g., GP 001, etc.).</p> <p>Under Operating Scenario 1, the booths are not subject to the NSPS. All booths fall into this scenario at the time of permit issuance.</p> <p>Under Operating Scenario 2, the coatings used in the booth are subject to the NSPS limits.</p> <p>Requirements that always apply are listed first, prior to both operating scenario requirements.</p>	<p>Minn. R. 7007.0800, subp. 11</p>
<p>Operating Scenario Recordkeeping. For each paint booth listed in GP 003, the Permittee shall record and maintain a written log which documents the scenario under which the paint booth is operating at any given time. The log shall be updated whenever any paint booth changes from one scenario to another, and it shall indicate which scenario is being used and the date and time of the operational change.</p> <p>Once a paint booth has ever operated in Scenario 2, the Permittee shall record and maintain a VOC materials usage log for the paint booth that documents which VOC containing materials were used under each operating scenario. The Permittee shall record the name of the material and the amount used. The log shall correlate the materials used to the Parts Recordkeeping required in the Total Facility Section of Table A of this permit.</p>	<p>Minn. R. 7007.0800, subp. 11</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

The Permittee shall vent emissions from all paint booths (EUs 004-017 and 019-029) to control equipment meeting the requirements of GP 002. Each paint booth shall have the control device specified in Appendix III of this permit.	Title I Condition: Limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Stipulation Agreement dated April 20, 2001
Transfer Efficiency: greater than or equal to 75 percent transfer efficiency for all spray guns. Transfer efficiency, for the purposes of this permit, is defined as the percentage of the total solids sprayed that is deposited either on the product being painted, the fixtures, or the masks being used to paint the parts.	Title I Condition: Limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Stipulation Agreement dated April 20, 2001
The Permittee shall use High Volume Low Pressure (HVLP) spray guns for all non-finish coating operations. Each spray booth shall be labeled as to whether it is used for finish or non-finish coating. The labels shall be updated any time the coating type changes.	Stipulation Agreement dated April 20, 2001
NON-NSPS-OPERATING SCENARIO 1	hdr
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 limit applies to each emissions unit individually.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity. This limit applies to each emissions unit individually.	Minn. R. 7011.0715, subp. 1(B)
NSPS-OPERATING SCENARIO 2	hdr
The requirements under this NSPS Operating Scenario apply to each spray booth in GP 003 in which plastic parts for use in the manufacture of business machines receive prime coats, color coats, texture coats, or touch-up coats.	40 CFR Section 60.720(a)
Terms used in this portion of Table A are as defined in state air pollution control rules or as defined in 40 CFR pt. 60, subps. TTT and A. The following select terms are included from 40 CFR Section 60.721 for clarity. - Business machine means a device that uses electronic or mechanical methods to process information, perform calculations, print or copy information, or convert sound into electrical impulses for transmission. - Nominal 1-month period means either a calendar month, 30-day month, accounting month, or similar monthly time period that is established prior to the performance test required by 40 CFR Section 60.723. - Coating solids applied means the coating solids that adhere to the surface of the plastic business machine part being coated.	40 CFR Section 60.721(a)
The Permittee shall comply with the emission limitations set forth in this portion of Table A on and after the date on which the initial performance test, required by Secs. 60.8 and 60.723 is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial startup, whichever date comes first.	40 CFR Section 60.722(a)
NSPS Limits	hdr
Volatile Organic Compounds: less than or equal to 1.5 kilograms/liter of solids coating applied from prime coating of plastic parts for business machines.	40 CFR Section 60.722(a)(1)
Volatile Organic Compounds: less than or equal to 1.5 kilograms/liter of solids coating applied from color coating of plastic parts for business machines.	40 CFR Section 60.722(a)(2)
Volatile Organic Compounds: less than or equal to 2.3 kilograms/liter of solids coating applied from texture coating of plastic parts for business machines.	40 CFR Section 60.722(a)(3)
Volatile Organic Compounds: less than or equal to 2.3 kilograms/liter of solids coating applied from touch-up coating of plastic parts for business machines.	40 CFR Section 60.722(a)(4)
NSPS Monitoring and Recordkeeping	hdr
All VOC emissions that are caused by coatings applied in each affected facility, regardless of the actual point of discharge of emissions into the atmosphere, shall be included in determining compliance with the VOC emission limits in this portion of Table A (from 40 CFR Section 60.722(a)).	40 CFR Section 60.722(b)
Initial Performance Test. For each affected facility, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, the Permittee shall conduct an initial performance test according to the Performance Test Procedures given in this permit.	40 CFR Section 60.723(b); 40 CFR Section 60.8(a)
Monthly Performance Test. The Permittee shall conduct a performance test each nominal 1-month period for each affected facility following the Performance Test Procedures given in this permit.	40 CFR Section 60.723(b)

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

<p>Performance Test Procedures.</p> <p>1). The Permittee shall determine the composition of coatings by analysis of each coating, as received, using Reference Method 24, from data that have been determined by the coating manufacturer using Reference Method 24, or by other methods approved by the Administrator.</p> <p>2). The Permittee shall determine the volume of coating and the mass of VOC used for dilution of coatings from company records during each nominal 1-month period. If a common coating distribution system serves more than one affected facility or serves both affected and nonaffected spray booths, the Permittee shall estimate the volume of coatings used at each facility by using procedures approved by the Administrator.</p>	<p>40 CFR Section 60.723(b)</p>
<p>Performance Test Procedures continued:</p> <p>3). The Permittee shall use one of the following methods for demonstrating compliance with the VOC limits.</p> <p>A. The Permittee shall calculate the volume-weighted average mass of VOCs in coatings emitted per unit volume of coating solids applied (N) at each coating operation [i.e., for each type of coating (prime, color, texture, and touch-up) used] during each nominal 1-month period for each affected facility using the procedures detailed in Appendix I of this permit. Each 1-month calculation is considered a performance test. OR</p> <p>B. If no VOCs are added to coatings during application or distribution (e.g., received coatings are not mixed with other materials prior to application), the Permittee shall demonstrate that each coating material as received is less than the limits specified in this permit by dividing the VOC content (in kg VOC/l of solids), as received, by the lowest transfer efficiency at which the coating is applied.</p>	<p>40 CFR Section 60.723(b)(2)(i)</p>
<p>Recordkeeping. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the emissions units including; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.</p>	<p>40 CFR Section 60.7(b); Minn. R. 7019.0100, subp. 1</p>
<p>Recordkeeping. The Permittee shall maintain records of all data and calculations used to determine monthly VOC emissions from each coating operation for each affected facility as specified in 40 CFR Section 60.7(d) for a period of at least two years. Regardless of this requirement, Minn. R. 7007.0800, subp 5(C) requires that all records be retained for 5 years from the date of generation.</p>	<p>40 CFR Section 60.724(d)</p>
<p>NSPS Reporting and Notifications</p>	<p>hdr</p>
<p>The Permittee shall submit a notification of any and each physical or operational change which makes an existing unit subject to the standard (change so that the unit now coats plastic parts for business machines); due 60 days (or as soon as practical) before the change is commenced. This notice shall include the information listed in 40 CFR 60.7(a)(4).</p>	<p>40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1</p>
<p>Initial Performance Test Report. The Permittee shall submit a report to the MPCA of the initial performance test results postmarked within 45 days of the end of the initial nominal 1-month period. The Permittee shall include the following data in the report:</p> <p>1). Except as provided for in the next item, the volume-weighted average mass of VOCs emitted to the atmosphere per volume of applied coating solids (N) for the initial nominal 1-month period for each coating operation from each affected facility.</p> <p>2). For each affected facility where compliance is determined under option 3(B) under the Performance Test Procedures, a list of the coatings used during the initial nominal 1-month period, the VOC content of each coating calculated from data determined using Reference Method 24, and the lowest transfer efficiency at which each coating is applied during the initial nominal 1-month period.</p>	<p>40 CFR Section 60.724(a) and (c)</p>
<p>Quarterly and Semiannual Reporting. The Permittee shall submit the following reports postmarked within 10 days after the end of the period specified below.</p> <p>1). The Permittee shall report the volume-weighted average mass of VOCs per unit volume of coating solids applied for each coating operation for each affected facility during each nominal 1-month period in which the facility is not in compliance with the applicable emission limits specified in Sec. 60.722. Reports of noncompliance shall be submitted on a quarterly basis, occurring every 3 months following the initial report; and</p>	<p>40 CFR Section 60.724(b)</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

<p>Quarterly and Semiannual Reporting continued.</p> <p>2). The Permittee shall submit statements that each affected facility has been in compliance with the applicable emission limits specified in Sec. 60.722 during each nominal 1-month period. Statements of compliance shall be submitted on a semiannual basis. If the Permittee does not operate any units under operating Scenario 2 during the reporting period, the Permittee shall submit a semiannual statement of compliance stating that there was no operation under Scenario 2. This shall only apply after the Notification of the Actual Date of Initial Startup for any given unit.</p>	<p>40 CFR Section 60.724(b)</p>
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TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

Subject Item: GP 004 Fabric Filters

Associated Items: CE 026 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 027 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 4 inches of water column unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The Permittee shall record the pressure drop once every 24 hours when in operation.	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter (see GP 006) is in operation.	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - 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 and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14
Alternative Pressure Drop Range: If the Permittee wishes to propose an alternative pressure drop range to the one specified in this permit without conducting a performance test, the Permittee shall submit the proposal to MPCA for review. The proposal shall contain control equipment vendor data, actual operating data, or other information as necessary, in order to justify an alternative range. Upon written approval by MPCA, the alternative range shall become an enforceable part of this permit.	Minn. R. 7007.0800, subp. 2
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

Subject Item: GP 005 Ovens

Associated Items: EU 001 Cure Oven (360)

EU 002 Cure Oven (361)

EU 003 Cure Oven (362)

EU 033 Dryer

EU 037 Dryer

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 limit applies separately to each oven or dryer.	Minn. R. 7011.0610, subp. 1(A)(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. This limit applies separately to each oven or dryer.	Minn. R. 7011.0610, subp. 1(A)(2)
Fuel Type: natural gas only, by design.	Minn. R. 7005.0100, subp. 35a
The Permittee shall keep records of fuel purchases for the Facility on a monthly basis.	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie
 Permit Number: 05301088 - 002

Subject Item: GP 006 Grinders

Associated Items: EU 042 Grinder (918)
 EU 043 Grinder (920)
 EU 044 Grinder (919)

What to do	Why to do it
The Permittee shall vent emissions from all grinders (EUs 042-044) to control equipment meeting the requirements of GP 004. Each grinder shall have the control device specified in Appendix III of this permit.	Title I Condition: Limit to avoid classification as a major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Stipulation Agreement dated April 20, 2001
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 limit applies to each emissions unit individually.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity . This limit applies to each emissions unit individually.	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/20/03

Facility Name: Douglas Corp - Eden Prairie
 Permit Number: 05301088 - 002

Subject Item: GP 007 Industrial Process Equipment

- Associated Items:**
- EU 031 Screen Press (470)
 - EU 032 Screen Press (452)
 - EU 034 Screen Press (455)
 - EU 035 Screen Press (451)
 - EU 036 Screen Press (406)
 - EU 038 Screen Press (453)
 - EU 047 Pad Printing Machine No. 226
 - EU 048 Pad Printing Machine No. 230
 - EU 050 Pad Printing Machine No. 229
 - EU 052 Pad Printing
 - EU 053 ABS Storage Silo
 - EU 054 ABS Storage Silo
 - EU 055 Acrylic Storage Silo

What to do	Why to do it
The equipment listed in GP 007 are units subject to the Minnesota Performance Standard for Industrial Process equipment that have not been listed elsewhere in this permit as being subject to this rule.	hdr
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 limit applies to each emissions unit individually.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity . This limit applies to each emissions unit individually.	Minn. R. 7011.0715, subp. 1(B)

TABLE B: SUBMITTALS

11/20/03

Facility Name: Douglas Corp - Eden Prairie
Permit Number: 05301088 - 002

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

11/20/03

Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup. This applies to each unit subject to 40 CFR pt. 60, subp. TTT (new, reconstructed, or modified existing units). The Permittee shall include a statement regarding the definition of nominal 1-month period for the unit with the submittal.	GP003
Notification of the Date Construction Began	due 30 days after Start Of Construction (or reconstruction). For each reconstructed unit subject to 40 CFR pt 60, subp. TTT, submit the name and number of each unit and the date construction of each unit began.	GP003
Report	due 1,095 days after 07/24/2001. The Permittee shall conduct two engineering studies to verify the transfer efficiency of the spray guns. The Permittee shall submit the results of the second study in this report.	GP003
Report	due 180 days after 07/24/2001. The Permittee shall conduct two engineering studies to verify the transfer efficiency of the spray guns. The Permittee shall submit the results of the first study in this report.	GP003

TABLE B: RECURRENT SUBMITTALS

11/20/03

Facility Name: Douglas Corp - Eden Prairie

Permit Number: 05301088 - 002

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 07/24/2001 . 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 30 days after end of each calendar year starting 07/24/2001 . The Permittee shall submit an annual report by January 30th each year that describes the changes made at the facility during the previous calendar year using the latest MPCA application forms (GI-04 and GI-05 series). The report shall document any equipment that was replaced, modified, or changed. 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 starting 07/24/2001 (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner, and to the U.S. EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX I
Facility Name: Douglas Corporation
Permit Number: 05301088-002

New Source Performance Standard Calculations: 40 CFR pt. 60, subp. TTT

1.0 Definitions

The symbols used in this Appendix I have the following meaning:

- D_c = density of each coating as received (kilograms per liter)
- D_d = density of each diluent VOC (kilograms per liter)
- L_c = the volume of each coating consumed, as received (liters)
- L_d = the volume of each diluent VOC added to coatings (liters)
- L_s = the volume of coating solids consumed (liters)
- M_d = the mass of diluent VOCs consumed (kilograms)
- M_o = the mass of VOCs in coatings consumed, as received (kilograms)
- N = the volume-weighted average mass of VOC emissions to the atmosphere per unit volume of coating solids applied (kilograms per liter)
- T = the transfer efficiency for each type of application equipment used at a coating operation (fraction)
- T_{avg} = the volume-weighted average transfer efficiency for a coating operation (fraction)
- V_s = the proportion of solids in each coating, as received (fraction by volume)
- W_o = the proportion of VOCs in each coating, as received (fraction by weight)

Other terms are as defined in 40 CFR pt. 60, subp. A or TTT or are as defined in state air pollution control rules.

2.0 Calculations

As required by Table A of this permit, the Permittee shall complete the calculations detailed in this Appendix I.

The Permittee shall calculate the volume-weighted average mass of VOCs in coatings emitted per unit volume of coating solids applied (N) for each coating operation [i.e., for each type of coating (prime, color, texture, and touch-up) used] during each nominal 1-month period for each affected facility. Except as provided in 40 CFR § 60.723(b)(2)(iii), N shall be determined by the following procedures:

(A) Calculate the mass of VOCs used ($M_o + M_d$) for each coating operation during each nominal 1-month period for each affected facility by the following equation:

$$M_o + M_d = \sum_{i=1}^n L_{ci} D_{ci} W_{oi} + \sum_{j=1}^m L_{dj} D_{dj}$$

where n is the number of coatings of each type used during each nominal 1-month period and m is the number of different diluent VOCs used during each nominal 1-month period. ($\sum L_{dj}D_{dj}$ will be 0 if no VOCs are added to the coatings, as received.)

(B) Calculate the total volume of coating solids consumed (L_s) in each nominal 1-month period for each coating operation for each affected facility by the following equation:

$$L_s = \sum_{i=1}^n L_{ci} V_{si}$$

where n is the number of coatings of each type used during each nominal 1-month period.

(C) Select the appropriate transfer efficiency (T) from Table 1 for each type of coating applications equipment used at each coating operation. If the Permittee can demonstrate to the satisfaction of the Administrator that transfer efficiencies other than those shown are appropriate, the Administrator will approve their use on a case-by-case basis. Transfer efficiency values for application methods not listed below shall be approved by the Administrator on a case-by-case basis. The Permittee must submit sufficient data for the Administrator to judge the validity of the transfer efficiency claims.

(D) Where more than one application method is used within a single coating operation, the Permittee shall determine the volume of each coating applied by each method through a means acceptable to the Administrator and compute the volume-weighted average transfer efficiency by the following equation:

$$T_{avg} = \frac{\sum_{i=1}^n \sum_{k=1}^p L_{cik} V_{sik} T_k}{L_s}$$

where n is the number of coatings of each type used and p is the number of application methods used.

Table 1--Transfer Efficiencies

Application methods	Transfer efficiency	Type of coating
Air atomized spray	0.25	Prime, color, texture, touch-up, and fog coats.
Air-assisted airless spray	0.40	Prime and color coats.
Electrostatic air spray	0.40	Do.

(E) Calculate the volume-weighted average mass of VOCs emitted per unit volume of coating solids applied (N) during each nominal 1-month period for each coating operation for each affected facility by the following equation:

$$N = \frac{M_o + M_d}{L_s T_{avg}}$$

($T_{avg} = T$ when only one type of coating operation occurs).

APPENDIX II
Facility Name: Douglas Corporation
Permit Number: 05301088-002

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.

Minn. R. 7007.1300, subp.	Rule Description of the Activity	General Applicable Requirement
3(G)	Laboratory equipment	Minn. R. 7011.0715 (PM and opacity)
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 microns, volatile organic compounds (including hazardous air pollutant-containing VOC), and ozone. <i>Douglas currently has injection molders, 2 laser cutters, and several small natural gas units that qualify under this subpart.</i>	Minn. R. 7011.0515 (PM, SO ₂ , and opacity) or Minn. R. 7011.0715 (PM and opacity)
4(B) and (C)	Individual emissions units that have actual emissions of less than or equal to 1 ton per year or potential emissions of 2.28 lb/hr or less of the criteria pollutants, and for hazardous air pollutants, emissions units with potential emissions of less than certain thresholds listed in Minnesota rules. <i>Douglas has two small VOC emitting units that qualify under this subpart that have a total PTE of less than 1 tpy. Douglas also has a pad printer and a pad printer tool washer that qualify under this subpart due to potential VOC emissions for each unit which are less than 2.28 lb/hr.</i>	Minn. R. 7011.0715 (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.

Minn. R. 7007.1300, subp.	Rule Description of the Activity	General Applicable Requirement(s)
3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane.	Minn. R. 7011.0515 (PM, SO ₂ , and opacity)
3(B)(1)	infrared electric ovens	Minn. R. 7011.0110 (opacity)
3(H)	Miscellaneous: 4. brazing, soldering or welding equipment;	Minn. R. 7011.0715 (PM and opacity)
	8. cleaning operations: alkaline/phosphate cleaners and associated cleaners and associated burners.	Minn. R. 7011.0610 + Minn. R. 7011.0715

APPENDIX II
Facility Name: Douglas Corporation
Permit Number: 05301088-002

Minn. R. 7007.1300, subp.	Rule Description of the Activity	General Applicable Requirement(s)
		(PM and opacity)

APPENDIX III
Facility Name: Douglas Corporation
Permit Number: 05301088-002

Emission Unit Description from Delta
Available in Paper Copy Only

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 05301088-002

This technical support document is intended for all parties interested in 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.

1. General Information

1.1. Applicant and Stationary Source Location:

Facility Address and Contact Information (SIC Code: 3082)
Douglas Corporation 9600 Valley View Road Eden Prairie, MN 55344 Hennepin County John Fudala, 952-826-3231

1.2. Description of the Facility

Douglas Corporation (Facility) is a manufacturer of plastic product identifiers (SIC 3082), including nameplates, decals, and decorative trim. Its clients primarily include automobile and large equipment manufacturers. The Facility consists of spray coating booths, a roll coater, screen presses, pad printing, storage silos, grinding, and small natural gas combustion sources (e.g., cure ovens, etc.). The Facility also has several activities that qualify as insignificant activities under Minn. R. 7007.1300, subp. 3 (see Appendix II to the permit). All booths have panel filters and the grinders have fabric filters to control particulate emissions.

1.3 Description of the Activities Allowed by this Permit Action

The existing permit allows the Permittee to replace or change paint booths, roller coaters, screen presses, and pad printers. The Permittee replaced a paint booth (EU 016 or Paint Booth 317) with a Robotic Paint Booth (EU 057). The Permittee now desires to re-install Paint Booth 317; however, re-installation of this booth requires a permit since it will not be replacing another booth. Since Booth 317 is being re-installed, the emission unit is renumbered as EU 058.

1.4. Facility Emissions:

In addition to the new paint booth, this permit action allows for the installation of two units classified as “insignificant activities” under Minn. R. 7007.1300, subp. 4(B) and 4(C) based upon potential VOC emissions from the units which are less than 2.28 lb/hr. The two units are a pad printer and a pad printer tool washer. It should be noted that the current permit includes pad printers which would normally be classified as “insignificant activities” under GP 001, “Total Facility VOC and PM Limits”. These units are included under GP 001 as a result of a previous enforcement action (see the Technical Support Document for Air Emission Permit No. 05301088-001). It is not necessary to include the two new insignificant activities under GP 001 unless inclusion would be necessary to avoid classification as a major stationary source under the Prevention of Significant Deterioration of Air Quality (PSD) Rules (40 CFR 52.21). As can be seen in Table 1, inclusion of the units at the maximum potential emission from the pad printer of 0.89 lb/hr (3.9 tpy) and maximum potential emissions from the pad printer tool washer of 0.24 lb/hr (1.05 tpy) does not cause permitted emissions from the facility to exceed the PSD major stationary source threshold of 250 tons per year of any pollutant.

Table 1. Total Facility Potential to Emit Summary:

	PM	PM ₁₀	NO _x	SO _x	VOC	CO
Permitted Units PTE (tpy)	63.8	63.8	0.7	0.00	100.04	0.60
Insignificant Activities, existing (tpy)	0.84	0.84	4.09	0.025	9.86	3.44
Insignificant Activities, new (tpy)	---	---	---	---	4.95	---
Total (tpy)	64.6	64.6	4.79	0.025	114.9	4.04

Hazardous Air Pollutant	Permitted Units PTE (tpy)	Hazardous Air Pollutant	Permitted Units PTE (tpy)
Methyl Isobutyl Ketone*	100	Vinyl Acetate	1.32
Methyl Ethyl Ketone	69.6	Cumene	0.34
Toluene*	100	Ethyl Benzene	2.38
Methanol	7.8	Xylene	79.6
Naphthalene	6.6	Glycol Ethers*	100
Formaldehyde	1.32	Total HAP*	100

tpy = tons per year, neg. = negligible

*HAP that is a VOC and is limited by the total VOC limit of 100 tpy.

Table 2. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		X (VOC and PM/PM-10)	
Part 70 Permit Program	X		

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 for the National Emissions Standards for Hazardous Air Pollutants (NESHAPs, 40 CFR pt. 63).

An overview of the regulations applicable to the paint booth is shown in the following table.

Table 3. Regulatory Overview of Units Affected by the Modification

Level*	Applicable Regulations	Comments:
TF (total facility)	STIP	Requirement to not use MEK in paint thinners and clean up solvent.
GP 001 (VOC and PM limits)	40 CFR § 52.21; STIP	Prevention of Significant Deterioration (PSD). Limits taken to avoid major source and modification classification under PSD for emissions of VOC and PM ₁₀ . The permit establishes limits on emissions of VOC and PM ₁₀ from all activities listed in GP 001; all other units are permitted at full, controlled, potential to emit. The limits are rolling limits due to substantial and unpredictable variations in operation. This permit also pre-authorizes the replacement of emissions units with similar units, and the modification of existing units, so long as the permit limits are met.
GP 002 (panel filters)	40 CFR § 52.21; STIP	PSD. Control efficiency and other operating parameter requirements to limit PM/PM ₁₀ PTE to avoid major source and modification classification under PSD (for future modifications).
GP 003 (spray booths)	40 CFR § 52.21; STIP 40 CFR § 52.21; STIP STIP Minn. R. 7007.0800, subp. 11	PSD. The permit requires all paint booths to be controlled by GP 002 (panel filters). PSD. Transfer Efficiency requirement of 75% for all spray guns. This is then used in the permit calculations. Requirement to use HVLP guns for all non-finish coating. Alternative Operating Scenarios. The permit allows the existing spray booths to be operated under two scenarios.

Level*	Applicable Regulations	Comments:
	Minn. R. 7011.0715	Scenario 1: This is when the booths are not subject to the NSPS. Standards of Performance for Post 1969 Industrial Process Equipment.
	40 CFR pt. 60, subp. TTT	Scenario 2: New Source Performance Standard for surface coating of plastic parts for use in business machines.

*Level --- EU = emission unit, GP = group, SV = stack/vent, CE = control equipment

3. Technical Information

Emissions calculations are attached to this document.

4. Conclusion

Based on the information provided by Douglas Corporation, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 05301088-002 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:

Craig Thorstenson (permit writer/engineer)

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Attachment:

Emission Calculations