

**AIR EMISSION PERMIT NO. 05500003- 001  
IS ISSUED TO**

**Northern Automotive Systems LLC**  
202 fourth Avenue Northeast  
Spring Grove, Houston County, MN 55974

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	June 15, 1995

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

**Permit Type:** State; Synthetic Minor Part 70

**Issue Date:** April 8, 2002

**Expiration:** April 8, 2007

All Title I Conditions do not expire.

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

for Karen A. Studders  
Commissioner  
Minnesota Pollution Control Agency

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**NOTICE TO THE PERMITTEE:**

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

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

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

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

**PERMIT SHIELD:**

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to 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:**

Northern Automotive manufactures decorated metal and plastic nameplates and automotive parts. Plastic parts may be produced by melting and molding plastic pellets into parts. Plastic and metal sheets may be used to make parts. Parts are decorated by the application of various inks, coatings, or paints. Coatings of sheets may be done by either priming before printing or adding a protective coating following lithographic or screened printing.

Lithography is a printing process in which the image configuration to be printed is rendered on a surface and treated so that it will retain ink. The non-image areas are treated to repel ink. Screening is a process where ink is pushed through open areas of a screen onto a metal or plastic sheet below the screen. Spraying is the application of paint by hand or automatically. All decorated parts are dried and cured in ovens.

Once decorated, the flat parts may be punched out (blanked) and curve and angled formed. The parts are washed and are then ready for inspection, packing, and shipping.

In addition, several modifications to the facility's operations are authorized in this permit. This permit authorizes the installation of a screening line consisting of a cylinder screening press with an electric curing oven. This is designated as PSO-74-SG (EU043). This line has the ability to be either heat set cure or UV cure. In addition, three ovens will be changed. The oven designated as EU12 (STO-17-SG) will be replaced with the oven from EU24. Hence, EU12 will now have a 1.25 MMBtu/hr oven. Moreover, EU24 (PSO-51-SG – which is a screening line consisting of an oven and two screening lines) will become a 1.5 MMBtu/hr oven with the same screening machines. Likewise, EU019 (STO-38-SG) 0.8 MMBtu/hr oven will be replaced with a 1.25 MMBtu/hr oven.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

04/08/02

Facility Name: Northern Automotive Systems LLC

Permit Number: 05500003 - 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>
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
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
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)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

04/08/02

Facility Name: Northern Automotive Systems LLC

Permit Number: 05500003 - 001

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 in a format specified by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3030
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
Fuel Usage: Fuel used at the facility is limited to natural gas or liquidified propane gas only. This includes fuel for both ovens and boilers.	Minn. R. 7007.0800, subp. 2
Volatile Organic Compounds: less than or equal to 95.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period. This does not include combustion VOC emissions.	Title I Condition: to avoid major source classification under 40 CFR Section 70.2
HAPs - Total: less than or equal to 24.5 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period.	Title I Condition: to avoid major source classification under 40 CFR 63.2
HAP-Single: less than or equal to 9.5 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period.	Title I Condition: to avoid major source classification under 40 CFR 63.2
VOC and HAP Material Content Monitoring: Obtain from the supplier a MSDS or Environmental Data Sheet (EDS) for all VOC-containing and HAP-containing materials used at the facility. The supplier data shall specify the VOC content and HAP content of each HAP in each material. Material content may be expressed in pounds per gallon or as a percent by weight if the density of the material is also indicated. Maintain supplier data for a minimum of five years.	Title I Condition: to avoid major source classification under 40 CFR 70.2 and 63.2
If the MSDS or EDS contains a range of a VOC or individual HAP content, the Permittee shall use the upper range for the monthly calculations, or other more specific information as provided by the manufacturer to the Permittee, or sampling.	Minn. R. 7007.0800, subp. 4
VOC/HAP Vapor Extraction Recordkeeping: by the 15th day of each month, record the quantity of VOC/HAP, from the vapor extraction (soil remediation) unit, emitted during the previous month.	Title I Condition: to avoid major source classification under 40 CFR 70.2 and 63.2
Monthly VOC Material Usage and VOC Usage Recordkeeping: by the 15th day of each month, record the quantity for each VOC-containing material and its VOC content used during the previous month. Separate records shall be kept for each material quantity and VOC content.	Title I Condition: to avoid major source classification under 40 CFR 70.2
Monthly and 12-month rolling sum VOC Emissions Recordkeeping:  1) by the 15th day of each month, calculate VOC emissions for the previous month as follows:  $\sum_{i=1}^n [(U_i \times C_i \times D_i)/2000 + (R/2000) - (W/2000)] = \text{VOC Emissions}$  where: n = number of all VOC containing materials used during month U <sub>i</sub> = VOC monthly usage (gallons) for material i C <sub>i</sub> = Percent VOC content, by weight, for material i D <sub>i</sub> = VOC material density (lb/gal) for material i R = VOC content emitted from vapor extraction unit (pounds) W = VOC waste shipped off-site (pounds)  2) by the 15th day of each month, calculate VOC emissions for previous 12-month period by summing the monthly VOC emissions for the previous 12 months.	Title I Condition: to avoid major source classification under 40 CFR 70.2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

04/08/02

Facility Name: Northern Automotive Systems LLC

Permit Number: 05500003 - 001

Monthly HAP Material Usage and HAP Usage Recordkeeping: by the 15th day of each month, record the quantity of each HAP from each HAP containing material and its HAP contents used during the previous month. Separate records shall be kept for each material's quantity of each HAP and each of its HAP's content.	Title I Condition: to avoid major source classification under 40 CFR 63.2
<p>Monthly and 12-month rolling sum Single HAP Emissions Recordkeeping:</p> <p>1) by the 15th day of each month, calculate single HAP emissions, for all HAP containing materials, for the previous month as follows:</p> $\sum_{i=1}^n [(U_i \times C_i \times D_i)] + (R/2000) - (W/2000) = \text{HAP Emissions}$ <p>where:  n = number of all materials containing same HAP used during the month  U<sub>i</sub> = HAP monthly usage (gallons) for material i  C<sub>i</sub> = Percent HAP content, by weight, for material i  D<sub>i</sub> = HAP material density (lb/gal) for material i  R = HAP content emitted from vapor extraction unit (pounds)  W = HAP content shipped off-site (pounds)</p> <p>2) by the 15th day of each month, calculate single HAP emissions, for all HAP containing materials, for previous 12-month period by summing the monthly HAP emissions for the previous 12 months.</p>	Title I Condition: to avoid major source classification under 40 CFR 63.2
<p>Monthly and 12-month Rolling Sum Total HAP Emissions Calculations:</p> <p>By the 15th day of each month:</p> <p>1) Calculate and record the total HAP emissions for the previous month by summing the individual HAP emissions from the previous month;</p> <p>2) Calculate and record the total HAP emissions for the previous 12-month period by summing the total monthly HAP emissions from the previous 12 months.</p>	Title I Condition: to avoid major source classification under 40 CFR 63.2
Maintain the records of the Shipper or Disposer certifications which state the amount of VOC and/or individual HAPs contained in the waste and the date the waste was shipped from the facility.	Title I Condition: to avoid major source classification under 40 CFR 70.2 and 63.2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

04/08/02

Facility Name: Northern Automotive Systems LLC

Permit Number: 05500003 - 001

**Subject Item:** GP 001 Boilers**Associated Items:** EU 001 Boiler PB-01-SG

EU 002 Boiler PB-02-SG

EU 003 Boiler PB-03-SG

What to do	Why to do it
Opacity: less than or equal to 20 percent except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0510, subp. 1
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 2



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

04/08/02

Facility Name: Northern Automotive Systems LLC

Permit Number: 05500003 - 001

**Subject Item:** GP 002 Paint Spray Booths**Associated Items:** EU 005 Paint Booth PSB-10-SG

EU 006 Paint Booth PSB-11-SG

EU 008 Paint Booth PSB-13-SG

EU 009 Paint Booth PSB-14-SG

EU 010 Paint Booth PSB-15-SG

EU 015 Paint Booth PSB-25-SG

EU 016 Paint Booth PSB-26-SG

EU 017 Paint Booth PSB-27-SG

EU 018 Paint Booth PSB-34-SG

EU 021 Paint Booth PSB-35-SG

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 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.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

04/08/02

Facility Name: Northern Automotive Systems LLC

Permit Number: 05500003 - 001

**Subject Item:** GP 003 Ovens**Associated Items:** EU 004 Box Oven PBO-09-SG

EU 011 Oven STO-16-SG

EU 012 Oven STO-17-SG

EU 019 Oven STO-38-SG

EU 024 Screening Line PSO-51-SG, with oven and 2 screen machine

EU 025 Screening Line PSO-52-SG, with oven and 2 screen machine

EU 026 Screening Line PSO-53-SG, with oven and 2 screen machine

EU 030 Screening Line PSO-64-SG, with oven and 2 screen machine

EU 031 Screening Line PSO-65-SG, with oven and 2 screen machine

EU 037 Oven SDO-45-SG

EU 038 Oven SDO-39-SG

EU 039 Coating Line, PCO-69-SG, with oven, 2 coaters, and 1 screen machine

EU 041 Coating Line, PCO-72-SG, with oven, 2 coaters, and 1 screen machine

What to do	Why to do it
Opacity: less than or equal to 20 percent except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1
Total Particulate Matter: less than or equal to 0.30 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.	Minn. R. 7011.0610, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

04/08/02

Facility Name: Northern Automotive Systems LLC

Permit Number: 05500003 - 001

**Subject Item: EU 033 UV Litho Line SLO-70-SG**

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 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.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

04/08/02

Facility Name: Northern Automotive Systems LLC

Permit Number: 05500003 - 001

**Subject Item: EU 036 Cleaning Oven PCO-68-SG**

<b>What to do</b>	<b>Why to do it</b>
Opacity: less than or equal to 20 percent except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1
Total Particulate Matter: less than or equal to 0.30 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.	Minn. R. 7011.0610, subp. 1
The cleaning oven unit is to be used as a rack, part, and drum reclamation unit, in accordance with 40 CFR 60 part 60.2555(k).	40 CFR 60 part 60.2555(k)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

04/08/02

Facility Name: Northern Automotive Systems LLC

Permit Number: 05500003 - 001

**Subject Item:** EU 043 Screening Cylinder Press (PSO-74-SG), with electric oven**Associated Items:** SV 045 SSO-74-SG

SV 046 SSO-74-SG

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 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.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)

## TABLE B: SUBMITTALS

04/08/02

Facility Name: Northern Automotive Systems LLC  
Permit Number: 05500003 - 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: RECURRENT SUBMITTALS**

04/08/02

Facility Name: Northern Automotive Systems LLC

Permit Number: 05500003 - 001

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

## APPENDIX MATERIAL

Facility Name: Northern Automotive Systems LLC

Permit Number: 05500003-001

### Insignificant Activities

Plastic grinding with vacuum with bag filter, no outside exhaust

Toll room: welding, EDM machine with ventilation

Maintenance: welding, plasma cutting, torching, brazing – hood exhaust

Screenmaking area: screen cleaning booth, exhausted, used for removing emulsions from screens with water, aqueous cleaners and haze remover with < 10% sodium hydroxide, 250,000 Btu box oven used for drying washed screen making equipment

Paint mixing lab, exhausted through vent and hood

Ink mixing lab, exhausted through vents and hoods

3 conveyors with infrared heat units: 2 used to dry off washed metal sheets, one used to dry machine lubricant off formed parts

One sheet prep applicator area which applies a water and < 1% VOC solution onto metal sheets for cleaning



**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**DRAFT AIR EMISSION PERMIT NO. 05500003-001**

This technical support document is for all the interested parties of the draft permit. The purpose of this document is to set forth the legal and factual basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions.

**1. General Information**

1.1. Applicant and Stationary Source Location:

Owner and Operator Address and Phone Number	Facility Address (SIC Code: 3089)
777 South Black River Street  Sparta, Wisconsin 54656	202 4th Ave NE  Spring Grove  Houston County

1.2. Description of the facility

Northern Automotive manufactures decorated metal and plastic nameplates and automotive parts. Plastic parts may be produced by melting and molding plastic pellets into parts. Plastic and metal sheets may be used to make parts. Parts are decorated by the application of various inks, coatings, or paints. Coatings of sheets may be done by either priming before printing or adding a protective coating following lithographic or screened printing.

Lithography is a printing process in which the image configuration to be printed is rendered on a surface and treated so that it will retain ink. The non-image areas are treated to repel ink. Screening is a process where ink is pushed through open areas of a screen onto a metal or plastic sheet below the screen. Spraying is the application of paint by hand or automatically. All decorated parts are dried and cured in ovens.

Once decorated, the flat parts may be punched out (blanked) and curve and angled formed. The parts are washed and are then ready for inspection, packing, and shipping.

The coating, inks, and paints are sources of VOCs and HAPs.

1.3 Description of the permit action

This permit action issues a Minnesota total facility operating permit. The facility is a synthetic minor to the Federal Part 70 operating permit program.

Several modifications to the facility's operations are also authorized in this permit. The existing facility VOC/HAP emission limits remained in place. This permit authorizes the installation of a screening line consisting of a cylinder screening press with an electric curing oven. This is

Permit Action Number:

Date: 2/19/2004

designated as PSO-74-SG (EU043). This line has the ability to be either heat set cure or UV cure.

In addition, three ovens will be changed. The oven designated as EU12 (STO-17-SG) will be replaced with the oven from EU24. Hence, EU12 will now have a 1.25 MMBtu/hr oven. Moreover, EU24 (PSO-51-SG – which is a screening line consisting of an oven and two screening lines) will become a 1.5 MMBtu/hr oven with the same screening machines. Likewise, EU019 (STO-38-SG) 0.8 MMBtu/hr oven will be replaced with a 1.25 MMBtu/hr oven.

#### 1.4 Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:

Emission Unit Description	PM tpy	PM10 Tpy	SO2 Tpy	NOx tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAPs tpy
Combustion Sources	1.54	1.54	3.32	30.98	17.01	1.11	-	-	-
Non-combustion Sources*	86.0**	86.0**				1,296	-	358.7	853.7

\* see attached spreadsheet for VOC and HAP breakdown by equipment type

\*\* from spray guns

	PM Tpy	PM10 tpy	SO2 tpy	NOx tpy	CO Tpy	VOC tpy	Pb tpy	Single HAP Tpy	All HAPs tpy
Total Facility Limited Potential Emissions	87.5	87.5	3.32	30.98	17.01	95.0*	-	9.5*	24.5*
Total Facility Actual Emissions**	1.48	1.48				49.3		2.5	6.68

\* Limited potential emissions through permit restrictions.

\*\* For 2000, as provided by Northern Automotive

Table 2. Facility (TF) and Permit Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD			x
NAAR			N/A
Part 70 Permit Program			x

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

## 2. Regulatory and/or Statutory Basis

Permit Action Number:

Date: 2/19/2004

## Summary Regulatory and/or Statutory Basis of the Emission or operational Limit

### Regulatory Overview of Facility

*EU, GRP, or SV #	Applicable Regulations	**Comments:
GP001	Minn. R. 7011.0510	Standards of Performance for Existing Indirect Heating Equipment
GP002	Minn. R. 7011.0715	Standards of Performance for Post-1969 Industrial Process Equipment
GP003	Minn. R. 7011.0610	Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
Total Facility	Title I Condition: to avoid major source classification under 40 CFR 70.2	VOCs: less than or equal to 95.0 tons/year using a 12-month rolling sum
Total Facility	Title I Condition: to avoid major source classification under 40 CFR 63.2	HAP-single: less than or equal to 9.5 tons/year using a 12-month rolling sum
Total Facility	Title I Condition: to avoid major source classification under 40 CFR 63.2	HAPs-total: less than or equal to 24.5 tons/year using a 12-month rolling sum

### 3. Technical Information

- This permit is a State total facility operating permit. Accordingly, the facility has taken limits on VOCs and HAPs to be a Federal synthetic minor Part 70 and Part 63 source.
- The VOC and HAPs limits are to be applied to the entire facility (excluding combustion sources). This means that emissions from units without stack/vents are to be included. Such emissions include cleanup solutions, pad printer emissions, vapor extraction unit, etc.
- The combustion calculations for the entire facility are based on the usage of either natural gas or liquefied propane gas. Accordingly, the facility is restricted to combusting either natural gas or propane at all of its boilers, ovens, etc.
- The vapor extraction unit for soil remediation is required under a MPCA remediation program. Due to its air emissions, it is included in this permit. The calculated VOC/HAP (trichloroethylene) monthly emissions, for the year 2001, were less than 10 pounds per month. Taking these values, the single HAP total is far less than 10 tpy. Hence, this unit does not trip any individual air requirements. The emissions from this unit are included in the overall existing VOC/HAP emission limits. The facility has provided that if monthly sample results in a value below a designated threshold, then the unit will be turned off for certain time period.
- EU 36 paint burn off oven appears to meet the ‘rack, part, and drum reclamation’ exemption found in the combustion rules 40 CFR 60 part 60.2555(k).
- A Group 4 and 5 were initially included in the draft permit. Subsequently, these Groups were not used. All of the emission units, requirements, and groups were individually deleted. However, these Group numbers may still be reserved in Delta for future Delta work.

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- In addition, several modifications to the facilities operations are authorized in this permit. The first modification was requested in the Jan. 11, 2002 permit application. In response to that amendment request, this permit authorizes the installation of a screening line consisting of a cylinder screening press with an electric curing oven. This is designated as PSO-74-SG. This line has the ability to be either heat set cure or UV cure. It is noted that the ink emission capacity is 8.0 lb/hr. This is for the UV cure. The heat set cure has a ink capacity of 3.4 lb/hr. The heat set cure ink has a higher VOC and HAPs content. Hence, the heat set emissions were used as the unit's PTE. The second modification request was made during the preparation of this permit. In that request, three ovens will be authorized to be changed. The oven designated as EU12 (STO-17-SG) will be replaced with the oven from EU24. Hence, EU12 will now have a 1.25 MMBtu/hr oven. Moreover, EU24 (PSO-51-SG – which is a screening line consisting of an oven and two screening lines) will become a 1.5 MMBtu/hr oven with the same screening machines. Likewise, EU019 (STO-38-SG) 0.8 MMBtu/hr oven will be replaced with a 1.25 MMBtu/hr oven.

- Rationale for why Minnesota Control Equipment Rule is not applicable:

*PM/PM10 PTE based on State Particulate Rule – Table 2:*

- 0.1 gr/dscf was used for each emission unit because all air flows are under 7000 dscfm.

$0.1 \text{ gr/dscf} \times 22,900 \text{ ft}^3/\text{min} \times 1 \text{ lb}/7000 \text{ gr} \times 1 \text{ ton}/2000 \text{ lbs} \times 60 \text{ min/hr} \times 8760 \text{ hrs/yr} = 86.0 \text{ tons/yr}$

*PM/PM10 Based on Solids Content and Control Equipment Rule:*

- All facility spray booths use air atomized spraying which has a transfer efficiency of 30 percent.

- The highest solids content paint the facility uses is 4.5 lb/gal of paint.

$8.5 \text{ gal/hr} \times 8760 \text{ hr/yr} \times 4.5 \text{ lbs (solids)}/\text{gal} \times (1 - 0.3) \times (1 - 0.92) \times 1 \text{ ton}/2000 \text{ lb} = 9.38 \text{ ton/yr}$   
86.0 tons/yr from non-combustion sources will be used as the PM and PM10 PTE. This is because the total facility PM and PM10 PTE will remain below 100 tons per year and the company will not have to comply with the recordkeeping and reporting requirements of the control equipment rule. The facility has particulate filters installed in the paint booths. These filters have been entered into Delta. However, the filters are not required nor is the control equipment rule.

#### 4. Conclusion

Based on the information provided by the Northern Automotive Systems, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 05500003-001 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: Bruce C. Braaten

Attachment: Calculations

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