

AIR EMISSION PERMIT NO. 03900014- 001

IS ISSUED TO

McNeilus Truck & Manufacturing, Inc.
County Road 34 East
Dodge Center, Dodge County, MN 55927

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	March 30, 1995. Application updated on January 18, 2002

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

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

Issue Date: December 3, 2002

Expiration: December 3, 2007

All Title I Conditions do not expire.

Michael (Mike) J. Tibbetts
Major Facilities Section Manager
Majors and Remediation Division

for Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

MM: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:

McNeilus Truck and Manufacturing, Inc. produces three product lines at its facility: ready mix concrete trucks (mixers), refuse packers (packers) and portable ready mix concrete plants (plants). Truck cab/chassis assemblies are delivered to the facility. Mixers and packers are fabricated, painted and installed on the cab/chassis. Some additional and touch-up painting of the cab/chassis may be required. After final assembly, a functionality test of the installed equipment is performed and the vehicle is ready for delivery.

The pollutant emitted in the greatest quantity is volatile organic compounds (VOCs) from the painting and cleaning operations. Several VOC hazardous air pollutants are also emitted from the painting and cleaning operations. No add-on controls are employed to reduce the quantity of VOCs emitted.

Particulate matter (PM) and particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀) are emitted from metal fabrication (welding), cleaning (primarily blasting), and

painting operations. PM and PM₁₀ emissions from welding operations are insignificant activities for purposes of this draft permit. PM and PM₁₀ emissions from the blasting operations are filtered through a baghouse and are then vented back into the building. As such, these activities are also insignificant activities for purposes of this draft permit. PM and PM₁₀ emissions from painting operations are filtered through panel filters and emitted to the atmosphere.

The permit contains requirements that limit emissions of VOCs, requires the use of particulate matter control on coating operations and authorizes certain changes that can take place during the permit term.

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 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**

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 cannot make any change at the source that would make the source a major source under New Source Review until a permit amendment has been issued. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments.	Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21; and Minn. R. 7007.3000
Insignificant Activities: The Permittee shall evaluate the emissions from changes made under Minn. R. 7007.1300 on an annual basis. The Permittee shall not make any change that causes emissions to exceed permit thresholds in Minn. R. ch. 7007 without first obtaining a major permit amendment.	Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.2; and Minn. R. 7007.3000
Equipment Inventory: The Permittee shall maintain a written list of all emissions units and control equipment on site. The Permittee shall update the list to include any replaced, modified or new equipment prior to making the pre-authorized change. The list shall correlate the units to the numbers used in this permit (EU, GP, CE) and shall include the data in Appendix II of this permit. The date of construction shall be the date the change was made for replaced, modified or new equipment.	Minn. R. 7007.0800, subp. 2
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Performance Testing	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
Monitoring	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

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
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

What to do	Why to do it
A. Limits	hdr
<p>Volatile Organic Compounds: less than or equal to 245 tons/year using 12-month Rolling Sum to be calculated by the 20th day of each month for the previous 12-month period as described later in this permit. This includes all combustion-source emissions of VOC.</p> <p>All emissions units or stacks added to GP 001 as allowed in this permit shall be included in this calculation. VOC contents for each VOC-containing material including, but not limited to, coatings and solvents shall be determined as described under the Material Content requirement in GP 001. The calculation of VOCs used may take into account recovered/recycled VOCs as described under the Waste Credit requirement in GP 001.</p>	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.
<p>The Permittee is pre-authorized to make the following changes:</p> <ol style="list-style-type: none"> 1) Move or replace guns included in GP 001 emissions units; 2) Replace listed emissions units with ones similar to those listed in GP 001; 3) Add one additional spray port to EU 005 (see EU 005 for specific limitations); 4) Add four new spray booths (see GP 005 for specific limitations); 5) Add two new bake ovens and two new flash-off ovens (see GP 006 for specific limitations); 6) Add heating capacity to EU 018 and EU 022 (see EU 018 and EU022 for specific limitations); 7) Add one 3-stage washer (see EU 030 for specific limitations); and 8) Modify the dimensions and air-flow characteristics of GP 001 booths. <p>Provided the following conditions are met:</p> <ol style="list-style-type: none"> 1) For replacement units or guns: the capacity is less than or equal to the unit/gun it replaces and the application method achieves the same or better transfer efficiency; 	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.
<p>Conditions under which the Permittee is pre-authorized to make the following changes: (continued)</p> <ol style="list-style-type: none"> 2) VOC emissions are tracked and calculated as specified in this permit; 3) All equipment must meet the requirements for GP 001; and 4) Prior to modification of any GP 001 booth dimensions or air-flow characteristics, the Permittee analyzes, and documents the analysis, evaluating compliance with the Minn.R. 7011. 0700 to 7011.0735; <p>If a proposed change triggers an applicable requirement that is not contained in this permit, the change must be permitted using the appropriate procedure in Minn. R. ch. 7007.</p>	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; and Minn. R. 7007.0800, subp. 4 and 5.
B. Monitoring	hdr
<p>Material Content: VOC content in all materials shall be determined by the Material Safety Data Sheet (MSDS) or Environmental Data Sheet (EDS) provided by the supplier for each material used. If a material content range is given on the MSDS or EDS, the highest number in the range shall be used in all compliance calculations. Other alternative methods approved by the MPCA may be used to determine the VOC content.</p> <p>The Commissioner reserves the right to require the Permittee to determine the VOC content of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the MSDS or EDS.</p>	Minn. R. 7007.0800, subp. 4 and 5
<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) If the waste is composed of more than one raw material (coatings, solvents, etc.) the Permittee may use MSDS or EDS for the raw materials to determine the VOC content of the waste. 2) The Permittee shall, at a minimum, analyze a composite sample of a waste shipment to determine the weight content of VOC on a quarterly basis for the first four calendar quarters; and semi annually thereafter. For purposes of the waste credit calculations, the VOC content shall be the average VOC content for the four previous calendar quarters. 	Minn. R. 7007.0800, subp. 4 and 5
C. Recordkeeping	hdr
<p>Daily Recordkeeping. On each day of operation, the Permittee shall maintain records of all coatings and other VOC containing materials used at the facility. This shall be based on shipping and delivery records.</p>	Title I Condition: Monitoring for Limit to avoid classification as major source and modification under 40 CFR 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800. subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

<p>Monthly Recordkeeping -- VOC Emissions.</p> <p>By the 20th of the month, the Permittee shall calculate and record the following:</p> <p>1) The total usage of VOC containing materials for the previous calendar month using the daily recordkeeping. This record shall also include the VOC content of each material as determined by the Material Content requirement of this permit.</p> <p>2) the total natural gas or LPG usage for the previous month</p> <p>3) The VOC emissions for the previous month using the formulas specified in this permit.</p> <p>4) The 12 month rolling sum VOC emissions for the previous 12 month period by summing the monthly VOC emissions data for the previous 12 months.</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>Monthly Calculation -- VOC Emissions.</p> <p>The Permittee shall calculate VOC emissions using the following equations:</p> <p>VOC (tons/month) = V + G - W</p> <p>$V = (A1 \times B1) + (A2 \times B2) + (A3 \times B3) + \dots$</p> <p>$G = E \times F$</p> <p>$W = (C1 \times D1) + (C2 \times D2) + C3 \times D3 + \dots$</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>Monthly VOC Emissions Calculation Continued:</p> <p>where:</p> <p>V = total VOC used in tons/month;</p> <p>A# = amount, in tons/month, pounds/month, or gallons per month, of each VOC containing material used;</p> <p>B# = weight percent VOC in A#, as a fraction or VOC content in lb./gal.;</p> <p>G = VOC emissions from natural gas and/or LPG combustion in tons/month;</p> <p>E = VOC emission factor for natural gas or LPG combustion, as appropriate;</p> <p>F = quantity of natural gas and/or LPG used/month;</p> <p>W = the amount of VOC shipped in waste, in tons/month;</p> <p>C# = amount, in tons per month, pounds/month, or gallons per month, of each VOC containing waste material shipped. If the Permittee chooses to not take credit for waste shipments, this parameter would be zero.</p> <p>D# = weight percent of VOC in C#, as a fraction or VOC content in lb./gal.</p> <p>Other units (such as gal. /month, lb. of VOC/gal., etc.) may be used in intermediate calculations.</p>	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

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 Particulate Matter < 10 micron: greater than or equal to 92 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
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 92 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the panel filters any time that any process equipment controlled by the panel filters is(are) in operation.	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each panel filter with respect to alignment, saturation, tears, holes and any other condition that may affect the filter's performance. The Permittee shall maintain a daily written record of filter inspections.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5
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
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.	Minn. R. 7007.0800, subp. 4, 5, and 14
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 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

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input The potential to emit of each unit is 0.008 lb/MMBtu based on allowable fuels and equipment capacity.	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0515, subp. 2
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

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

What to do	Why to do it
Limits	hdr
The Permittee shall vent emissions from all spray booths to control equipment meeting the requirements of GP 002.	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735. This applies to each seperate piece of industrial process equipment.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

What to do	Why to do it
<p>Authorization for new Coating Operations: The Permittee may install the units listed in GP 005 at any time during the life of this permit provided the following conditions are met:</p> <ol style="list-style-type: none">1) The total capacity of spray booth is no greater than that listed in Appendix II of this permit;2) The make-up air units can only burn natural gas or LPG;3) The new equipment application method achieves the same or better transfer efficiency than the current equipment;4) Each spray booth incorporates control equipment that meets the requirements of GP 002; and5) All other permit conditions are met (e.g. controls, emissions limits, etc.). <p>If the proposed change triggers an applicable requirement (e.g. 112g) that is not contained in this permit, the change must be permitted using the appropriate procedure in Minn. R. ch. 7007.</p>	<p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21;and Minn. R. 7007.3000</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

What to do	Why to do it
<p>Authorization for New Indirect Heating Equipment: The Permittee may install the units listed in GP 006 at any time during the life of this permit provided the following conditions are met:</p> <ol style="list-style-type: none">1) The total capacity of each emissions unit is no greater than that listed in Appendix II of this permit;2) The emissions units can only burn natural gas or LPG;4) The emissions units meet the requirements of GP 003; and5) All other permit conditions are met (e.g. controls, emissions limits, etc.). <p>If the proposed change triggers an applicable requirement (e.g. 112g) that is not contained in this permit, the change must be permitted using the appropriate procedure in Minn. R. ch. 7007.</p>	<p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21;and Minn. R. 7007.3000</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

Subject Item: EU 005 Drum Priming**Associated Items:** CE 005 Mat or Panel Filter

What to do	Why to do it
<p>Authorization for Additional Spray Port and Gun: The Permittee may install a second spray port and gun in EU 005 at any time during the life of this permit if the following conditions are met:</p> <ol style="list-style-type: none">1) The total capacity of the spray booth is no greater than that listed in Appendix II of this permit;2) The new equipment application method achieves the same or better transfer efficiency than the current equipment; and3) All other permit conditions are met (e.g. controls, emissions limits, etc.). <p>If the proposed change triggers an applicable requirement (e.g. 112g) that is not contained in this permit, the change must be permitted using the appropriate procedure in Minn. R. ch. 7007.</p>	<p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21;and Minn. R. 7007.3000</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

Subject Item: EU 018 Packer Line Curing Oven

What to do	Why to do it
<p>Authorization to Modify Indirect Heating Equipment: The Permittee may modify EU 018 (indirect heating equipment) at any time during the life of this permit provided the following conditions are met:</p> <ol style="list-style-type: none">1) The total capacity of EU 018 is no greater than that listed in Appendix II of this permit;2) EU 018 can only burn natural gas or LPG;4) EU 018 meets the requirements of GP 003; and5) All other permit conditions are met (e.g. controls, emissions limits, etc.). <p>If the proposed change triggers an applicable requirement (e.g. 112g) that is not contained in this permit, the change must be permitted using the appropriate procedure in Minn. R. ch. 7007.</p>	<p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21;and Minn. R. 7007.3000</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

Subject Item: EU 022 Drum Line Curing Oven

What to do	Why to do it
<p>Authorization to Modify Indirect Heating Equipment: The Permittee may modify EU 022 (indirect heating equipment) at any time during the life of this permit provided the following conditions are met:</p> <p>1) The total capacity of EU 022 is no greater than that listed in Appendix II of this permit;</p> <p>2) EU 022 can only burn natural gas or LPG;</p> <p>4) EU 022 meets the requirements of GP 003; and</p> <p>5) All other permit conditions are met (e.g. controls, emissions limits, etc.).</p> <p>If the proposed change triggers an applicable requirement (e.g. 112g) that is not contained in this permit, the change must be permitted using the appropriate procedure in Minn. R. ch. 7007.</p>	<p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21;and Minn. R. 7007.3000</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

What to do	Why to do it
<p>Authorization for 3 stage washer: The Permittee may install a 3 stage washer at any time during the life of this permit provided the following conditions are met:</p> <ol style="list-style-type: none">1) The total capacity of emissions unit is no greater than that listed in Appendix II of this permit;2) The emissions units can only burn natural gas or LPG;4) The emissions units meet the requirements of GP 003; and5) All other permit conditions are met (e.g. controls, emissions limits, etc.). <p>If the proposed change triggers an applicable requirement (e.g. 112g) that is not contained in this permit, the change must be permitted using the appropriate procedure in Minn. R. ch. 7007.</p>	<p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21;and Minn. R. 7007.3000</p>

TABLE B: SUBMITTALS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc
Permit Number: 03900014 - 001

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send any application for a permit or permit amendment to:

Permit Technical Advisor
Permit Section
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

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

Supervisor
Compliance Determination Unit
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc
Permit Number: 03900014 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility

TABLE B: RECURRENT SUBMITTALS

12/03/02

Facility Name: McNeilus Truck & Manufacturing Inc

Permit Number: 03900014 - 001

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Annual Report	due 31 days after end of each calendar year following Permit Issuance. The Permittee shall submit an annual report by January 30 that describes the changes made at the facility during the previous calendar year using the latest MPCA forms. The report shall include the emission unit, stack/vent, group, and control equipment data for any new or replaced units or control devices. For new or replaced spray equipment, the report shall also include the application method and transfer efficiency. The report shall document the VOC 12-month rolling sum calculations for the previous calendar year, New Source Performance Standards that were triggered in the last calendar year. The report shall be submitted with the annual Compliance Certification listed in Table B. As part of the Annual Report, the Permittee shall verify and certify that the facility has maintained minor source status for New Source Review.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

ADDITIONAL APPENDIX MATERIAL

APPENDIX I

Facility Name: McNeilus Truck & Manufacturing Inc
Permit Number: 03900014-001

INSIGNIFICANT ACTIVITIES AND GENERAL APPLICABLE REQUIREMENTS

The table below lists the insignificant activities at the facility and their associated general applicable requirements

Insignificant Activity	Applicable Requirement
Space Heaters ¹	40 CFR 52.21, (VOC) Minn. R 7011.0515, (PM and Opacity)
Welding Operations	Minn. R. 7011.0715, (PM and Opacity)
Processing Operations: Equipment venting PM/PM ₁₀ through a filter 100 % of the time.	Minn. R. 7011.0715, (PM and Opacity)

¹ The facility listed 284 space heaters in its application. The units range in size from 60,000 Btu/hr to 4.32 MMBtu/hr. Minnesota Rules 7007.1300, subp. 4 was cited as the rule under which these emissions units are insignificant activities. The sum of the heat input rates from these emissions units is 70.1 MMBtu/hr. All natural gas used at the stationary source is metered through a single meter. The VOC emissions from these heaters must be included in the VOC emissions calculations from natural gas combustion.

ADDITIONAL APPENDIX MATERIAL

APPENDIX II

Facility Name: McNeilus Truck & Manufacturing Inc
 Permit Number: 03900014-001

NEW EQUIPMENT



MINNESOTA POLLUTION CONTROL AGENCY
 AIR QUALITY
 520 LAFAYETTE ROAD
 ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM **GI-05A**
POLLUTION CONTROL
EQUIPMENT INFORMATION
 5/26/98

1) AQ Facility ID No.: 03900014 2) Facility Name: McNeilus Truck and Manufacturing

3a) Control Equip ID No.	3b) CE Type Code	3c) Description	3d) Manufacturer	3e) Model No.	3f) Pollutants Controlled	3g) Capture Efficiency	3h) Destruct/Collect Efficiency	3i) Afterburner Combustion Parameters
026	058	New Topcoat Paint Booth #1 Filters			PM/PM ₁₀	100	92	
027	058	New Topcoat Paint Booth #2 Filters			PM/PM ₁₀	100	92	
028	058	New Topcoat Paint Booth #3 Filters			PM/PM ₁₀	100	92	
029	058	New Topcoat Paint Booth #4 Filters			PM/PM ₁₀	100	92	



MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY
520 LAFAYETTE ROAD
ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM **GI-05B**
EMISSION UNIT INFORMATION,
PART 1
5/26/98

1) AQ Facility ID No.: 03900014 2) Facility Name: McNeilus Truck and Manufacturing

3a) Emis Unit ID No.	3b) SV ID No(s).	3c) Relatio n Type	3d) Control Equip ID No.	3e) Emission Unit Operator's Description	3f) Manufacturer	3g) Model No.
005	001		005	Drum Priming Booth	JB	
018	027- 029			Packer Line Curing Oven	Eagle	
022	054 – 055			Drum Line Curing Oven	Eagle	
026			026	New Topcoat Paint Booth #1		
027			027	New Topcoat Paint Booth #2		
028			028	New Topcoat Paint Booth #3		
029			029	New Topcoat Paint Booth #4		
030				Multi-stage Washer		
031				New Flash-off Oven #1		
032				New Flash-off Oven #2		



MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY
520 LAFAYETTE ROAD
ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM **GI-05B**
EMISSION UNIT INFORMATION,
PART 2

1) AQ Facility ID No.: 03900014 2) Facility Name: McNeilus Truck and Manufacturing

3a) Emis Unit ID No.	3h) Maximum Design Capacity	3i) Maximum Design Capacity Units	3j) Maximum Fuel Input (MMBTU)	3k) Commence Construction Date (MM/DD/YY)	3l) Initial Startup Date (MM/DD/YY)	3m) Firing Method (coal- burning units only)	3n) % Fuel for Space Heat (boilers only)	3o) Bottle-neck? F = facility G = group of sources	3p) SIC Code
005	18.76	Gal/hr	1.925						
018			7.1						
022			7.1						
026	16.88	Gal/hr	4.675						
027	16.88	Gal/hr	4.675						
028	15.0	Gal/hr	4.675						
029	15.0	Gal/hr	4.675						
030			5.0						
031			1.5						
032			1.5						



1) AQ Facility ID No.: 03900014 **2) Facility Name:** McNeilus Truck and Manufacturing

[illegible]

**PERMIT APPLICATION FORM GI-05B**
EMISSION UNIT INFORMATION,
PART 2[illegible]

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 03900014-001

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

CONTENT:

1. General Information

- 1.1. Applicant and Stationary Source Location
- 1.2. Description of the Facility
- 1.3. Description of Any Changes Allowed with this Permit Issuance
- 1.4. Description of All Amendments Issued Since Issuance of the Last Total Facility Permit.
- 1.5. Facility Emissions

2. Applicable Rules (Regulatory and/or Statutory Basis of Emission Limits)

3. Technical Information

- 3.1. Pre-authorized Changes
- 3.2. Potential to Emit Calculations
- 3.3. Periodic Monitoring/Recordkeeping
- 3.4. Additional Analysis
 - 3.4.1. Vehicle Emissions
 - 3.4.2. Hazardous Air Pollutant Ambient Concentrations
- 3.5. Deviations From Delta Guidance
- 3.6. Insignificant Activities

4. Conclusion

Attachment 1, Potential to Emit Summary

Attachment 2, Space Heaters

Attachment 3, Draft Permit Comments and Resolutions

1. General Information

1.1. Applicant and Stationary Source Location:

Owner and Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 3713)
McNeilus Truck & Manufacturing, Inc. P.O. Box 70 Highway 14 East Dodge Center, MN 55927 (507) 374-6321	Highway 14 East Dodge Center, MN 55927 Dodge County

1.2. Description of the Facility

McNeilus Truck and Manufacturing, Inc. produces three product lines at its facility: ready mix concrete trucks (mixers), refuse packers (packers) and portable ready mix concrete plants (plants). Truck cab/chassis assemblies are delivered to the facility. Mixers and packers are fabricated, painted and installed on the cab/chassis. Some additional and touch-up painting of the cab/chassis may be required. After final assembly, a functionality test of the installed equipment is performed and the vehicle is ready for delivery. Final Painting of packers and mixers is conducted on the same property.

The pollutant emitted in the greatest quantity is volatile organic compounds (VOCs) from the painting and cleaning operations. Several VOC hazardous air pollutants (HAPs) are also emitted from the painting and cleaning operations. No add-on controls are employed to reduce the quantity of VOCs emitted.

Particulate matter (PM) and particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀) are emitted from metal fabrication (welding), cleaning (primarily blasting), and painting operations. Particulate matter and PM₁₀ emissions from welding operations are insignificant activities for purposes of this permit. Particulate matter and PM₁₀ emissions from the blasting operations are filtered through a baghouse and are then vented back into the building. As such, these activities are also insignificant activities for purposes of this permit. Particulate matter and PM₁₀ emissions from painting operations are filtered through panel filters and emitted to the atmosphere.

1.3 Description of Any Changes Allowed with this Permit Issuance

The permit authorizes the reactivation of a touch up paint booth (EU 025 in the permit) that was disabled under permit number 03900014-007. This permit also pre-authorizes certain changes at the facility that can be made over the life of this permit. The following are changes that the facility can make as long as all permit conditions are met, and as long as no new applicable requirements are triggered:

- move or modify coating equipment;

- replace coating and indirect heating equipment with similar equipment;
- add one additional spray port and gun to a priming booth;
- add four new spray booths;
- add two new bake ovens and two new flash-off ovens;
- add heating capacity to two curing ovens;
- add one 3-stage washer; and
- modify the dimensions and airflow characteristics of painting booths.

See Section 3.1 in this document for more discussion of the pre-authorized changes.

1.4 Description of All Amendments Issued Since Issuance of the Last Total Facility Permit.

Table 1 presents the permitting history of the facility since the last total facility permit was issued.

Table 1. Permit History Summary

Permit Number and Issuance Date	Action Authorized
03900014-003 12/12/95	Added two new painting lines, total facility VOC cap of 240 tons/yr.
03900014-005 6/8/99	Added two painting lines
03900014-007 3/8/00	Added three curing booths and replacement of one painting booth
03900014-006 4/8/00	Raised VOC cap to 249 tons/yr. Amended recordkeeping and reporting requirements
03900014-008 1/11/02	Added curing booth

1.5. Facility Emissions:

Table 2. Total Facility Potential to Emit Summary:

EU or GP #	SV#	Emission Unit Description	PM Tpy	PM ₁₀ Tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC* Tpy	Pb tpy	Single HAP tpy	All HAPs Tpy
GP 4		Priming, Painting and Solvent Usage	32.3**	32.3**~	0.28	49.5	24.0		1.3E-04	245*** (xylenes)	245***
EU 10		Final Curing Booth	0.113	0.113	0.009	1.49	1.25		7.46E-06	0.0268 (hexane)	0.0912
EU 15		Monorail Curing Oven	0.096	0.096	0.008	1.258	1.057		6.29E-06	0.0226 (hexane)	0.0769
EU 18		Packer Line Curing Oven	0.225	0.225	0.018	2.96	2.49		1.48E-05	0.0533 (hexane)	0.181
EU 21		Large Parts Curing Oven	0.052	0.052	0.004	0.688	0.578		3.44E-06	0.001238 (hexane)	0.0421
EU 22		Drum Line Curing Oven	0.225	0.225	0.018	2.96	2.49		1.48E-05	0.0533 (hexane)	0.181
EU 23		Plant Curing Oven	0.159	0.159	0.013	2.086	1.752		1.04E-05	0.03754 (hexane)	0.128
EU 30		Future Multi-stage washer	0.159	0.159	0.013	2.09	1.75		1.04E-05	0.03754 (hexane)	0.128
EU 31		Future Flash-off Oven No. 1	0.079	0.079	0.006	1.04	0.876		5.21E-06	0.01877 (hexane)	0.0637
EU 32		Future Flash-off Oven No. 2	0.079	0.079	0.006	1.04	0.876		5.21E-06	0.01877 (hexane)	0.0637
EU 33		Future Bake Oven No. 1	0.225	0.225	0.018	2.96	2.49		1.48E-05	0.05331 (hexane)	0.1811
EU 34		Future Bake Oven No. 2	0.225	0.225	0.018	2.96	2.49		1.48E-05	0.05331 (hexane)	0.1811

	PM Tpy	PM ₁₀ Tpy	SO ₂ tpy	NO _x Tpy	CO tpy	VOC tpy	Pb tpy	Single HAP Tpy	All HAPs Tpy
Total Facility Limited Potential Emissions	33.9	33.9	0.35	58.2	48.9	245	1.99E-4	245	245
Total Facility Actual Emissions	9.6	9.6	0.04	6.3	5.3	220.3	0.0	10.0 (xylene)	12.4

*The Permittee has accepted a VOC limit of 245 tons/year for the entire facility including VOC emissions from combustion sources and insignificant activities.

** See Section 3.2 of this document for further discussion of the PM/PM₁₀ potential to emit. The PM/PM₁₀ PTE from coating is 30.9 tons per year. The PM/PM₁₀ PTE from the combustion sources associated with this group is 1.39 tons per year.

*** Based on total facility VOC limit of 245 tons per year.

Table 3. Facility (TF) and Permit Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD		VOC, PM, PM ₁₀	
NAAR	NA		
Part 70 Permit Program	VOC, PM ₁₀ , HAPs		CO, NO _x , SO ₂

* 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

Table 4. Regulatory Overview of Facility

EU, GRP, or SV #	Applicable Regulations	Comments:
GP001	40 CFR 52.21	Prevention of Significant Deterioration. VOC usage limit to avoid classification as a major source.
GP002	40 CFR 52.21	Prevention of Significant Deterioration. Require usage of panel filters to avoid classification as a major source for PM, PM ₁₀ .
GP003	Minn. R. 7007.0510	Standards of Performance for New Indirect Heating Equipment
EU005	Minn. R. 7011.0715	Standards of Performance for post-1969 Industrial Process Equipment

3. Technical Information

3.1 Pre-authorized Changes

This permit pre-authorizes certain changes that might otherwise be considered a modification under state and federal rules. The following changes are authorized as long as all permit conditions are met and as long as no new applicable requirements are triggered:

- move or modify coating equipment;
- replace coating and indirect heating equipment with similar equipment;
- add one additional spray port and gun to a priming booth;
- add four new spray booths;
- add two new bake ovens and two new flash-off ovens;
- add heating capacity to two curing ovens;
- add one 3-stage washer; and
- modify the dimensions and airflow characteristics of painting booths.

The permitted allowable emissions take into account maximum gun capacity, maximum VOC and solids contents of coatings and the total facility VOC cap. All applicable requirements and necessary monitoring are in the permit. The authorized changes will not cause an increase under Minn. R. 7007.1200, subp. 3 (calculating emissions

increases for non-Title I changes). So, the authorized changes are not modifications and can be made without the need of a permit amendment. The Permittee must verify that any proposed change does not trigger 112(g) prior to making the change.

Section 112(g), as codified in 40 CFR 63 Subpart B, applies to “process or production units”. “Process or production units” means that the emissions unit produces a product, “not units which are just one essential part of a larger function.” (Federal Register Vol. 61, December 27, 1996, page 68390) McNeilus Truck and Manufacturing produces complete mixers and packers which requires many other steps in the process. Given this, it is highly unlikely that the addition of any of the pre-authorized emissions units would trigger Section 112(g)

3.2 Potential to Emit Calculations

Attachment 1 to this TSD summarizes the PTE of the facility. The attachment contains copies of Form GI-07 which summarizes the PTE for the all emissions units except solvent usage. The solvent usage PTE is based on usage during the year 2000, adjusted for 8760 hours of operation and further adjusted to better reflect potential emissions rather than actual emissions.

Establishing a PM₁₀ limit was considered during the permitting process. The uncontrolled PM₁₀ PTE exceed 2,200 ton/yr. and the limited PM₁₀ PTE is 61.5 ton/yr. considering the effects of pollution control equipment and Minnesota Industrial Process Equipment rules (parts 7011.0700 to 7011.0735). However, the probability of the stationary source exceeding the limited PM₁₀ is very small based on the 245 ton/yr. VOC limit and the solids content of the coatings.

Assuming that:

- the only coating sprayed is the highest solids coating (a primer),
 - the equipment used has the lowest transfer efficiency of all of the painting equipment and the stationary source (touch up gun), and
 - panel filters, which are a requirement of the permit, are used,
- the PM₁₀ PTE is 30.9 ton/yr.

Primer coatings account for approximately one-half of the total number of gallons of coatings used and the vast majority of the coatings are applied with spray equipment with double the transfer efficiency of a touch up gun.

The potential to emit PM₁₀ from natural gas combustion is 3.03 tons per year. Therefore, the estimated PM₁₀ potential to emit is 33.9 tons per year. Given that the applicable (PSD) threshold is 250 tons per year, an additional limit for PM₁₀ is unnecessary.

3.3 Periodic Monitoring/Recordkeeping

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

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

Table 5 summarizes the periodic monitoring requirements for those emissions units for which monitoring required by the applicable requirement is nonexistent or inadequate.

Table 5. Emissions Units Subject to Periodic Monitoring

EU/GP/CE	Emission Limit and Basis	Additional Monitoring	Discussion
Coating, curing and Cleaning Operations: GP001	≤ 245 tons per year Limit to avoid classification as a major source under 40 CFR 52.21.	Recordkeeping: Daily recordkeeping of VOC usage of VOC containing materials including coatings, additives and solvents. Daily recordkeeping of VOC-containing materials sent off-site as hazardous waste. Monthly recordkeeping of natural gas usage. Monthly emission calculations using mass balance for VOCs from coatings and solvents and emission factor calculations for natural gas combustion.	The facility currently sends off-site (as hazardous waste) or recycles a large portion of their cleaning solvents.

Table 5. Emissions Units Subject to Periodic Monitoring (Continued)

EU/GP/CE	Emission Limit and Basis	Additional Monitoring	Discussion
Panel Filters: GP002	PM/PM ₁₀ : Control Efficiency of at least 92 %	Recordkeeping, O & M, Inspections	<p>Monitoring based on the Minnesota Performance Standard for Control Equipment is adequate to have a reasonable assurance of compliance.</p> <p>The Control Equipment Rule lists the standard periodic monitoring that the MPCA expects for listed control equipment. For spray booths, with wall filters, the rule requires daily inspection of the installation and condition of the filters and a daily record of the inspection. The differential pressure across a filter system is a commonly monitored parameter for PM control systems.</p>
			<p>The pressure drop across a wall filter is too small to be meaningful and is therefore not required.</p> <p>For these reasons, the periodic monitoring in the permit is adequate to reasonably assure compliance with the applicable requirements.</p>

3.4 Additional Analysis,

3.4.1 Vehicle Emissions

Cab/chassis assemblies that are delivered to the facility comply with the Clean Air Act requirements for the vehicle classification. Mixers and packers are fabricated, painted and installed on the cab/chassis. After final assembly, a functionality test of the installed equipment is performed and the vehicle is ready for delivery. Currently the facility produces approximately 70 to 100 finished trucks per week. Vehicles are run

for approximately one hour for the final functionality test and are driven from workstation to workstation. This results in an estimated 70 to 100 engine hours of operation per week.

Because the vehicles are certified by the cab/chassis manufacturer to comply with the requirements of the Clean Air Act, there are no other applicable requirements specific to these emissions units. All of the emissions units that make up stationary source must comply with the requirements of the National and Minnesota ambient air quality standards. The MPCA has some experience modeling the impact of idling diesel trucks on a stationary source's ability to comply with the ambient air quality standards. Based on this experience, it is reasonable believe that the 70 to 100 engine hours will not cause a violation of the ambient air quality standards

3.4.2 Hazardous Air Pollutant Ambient Concentrations

A rudimentary ambient impact exercise for HAPs revealed no exceedances of the health risk values (Minn. R. parts 4717.8000 to 4717.8600). The results of this exercise and the associated HRVs are presented in Table 6.

The following parameters were used in the evaluation:

- polar grid in 36 directions at 14 down wind distances (20, 40, 60, 80, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1,000 meters);
- flat terrain;
- five years of surface meteorological data from Rochester, MN; and
- a single hypothetical stack, 1 meter in diameter and 10 meter exit height with 10m/s exit velocity.

The HMDI Emission rate was estimated as follows:

$$\left(\frac{0.0140 \text{ lb HMDI}}{\text{gal. of hardener}} \right) \left(\frac{0.2857 \text{ gal. of hardener}}{\text{gal. of Paint}} \right) = 0.003999 \text{ lb. of HMDI} / \text{gal of Paint}$$

$$\left(\frac{0.004 \text{ lb. of HMDI}}{\text{gal. of Paint}} \right) \left(\frac{145189.5 \text{ gal. of Paint}}{\text{yr.}} \right) = 580.7 \text{ lb. of HMDI} / \text{yr.}$$

Based on best engineering judgment, >99 % of the HMDI reacts. Therefore, it is not emitted as HMDI. This results in an estimated emission rate of 5.81 lb./yr.

$$\left(\frac{5.81 \text{ lb. of HMDI}}{\text{yr.}} \right) \left(\frac{\text{yr.}}{8760 \text{ hr.}} \right) = 0.00066 \frac{\text{lb. of HMDI}}{\text{hr.}}$$

Table 6. Hazardous Air Pollutant Concentrations

Chemical	Emission Rate (lb./hr)	Chronic HRV ($\mu\text{g}/\text{m}^3$)	Estimated Annual Concentration ($\mu\text{g}/\text{m}^3$)	Acute HRV ($\mu\text{g}/\text{m}^3$)	Estimated 1-hour Average Concentration ($\mu\text{g}/\text{m}^3$)
Ethylbenzene	10.36			10,000	1,082
Xylenes	50.05			43,000	5232
Methyl ethyl ketone	18.69			10,000	1,954
Methyl isobutyl ketone	18.69				
2-butoxyethyl acetate	21.98				
Toluene	0.69	400	2.97	37,000	72
1,6-hexamethylene diisocyanate	0.00066	0.01	0.00283*		

* The calculation assumes an average emission rate over the entire year. This is reasonable because the HRV to which the average concentration is compared is the chronic HRV. This emission rate is based on a 249 TPY VOC (145,189.5 gal. of paint) limit and assuming that all paints applied have a 1,6-hexamethylene diisocyanate (HMDI) content of 0.004 lb./gallon. This is a conservative assumption because approximately one-half of the coating applied is a primer and contains no HMDI. The maximum HMDI content per gallon of hardener (0.0140 lb./gal.) provided by Akzo Nobel. The maximum hardener content per gallon of paint (28.57% by volume) provided by McNeilus Truck & Mfg. Inc.

3.5 Deviations from Delta Guidance

In general, this permit meets the MPCA Delta Guidance for ordering and grouping of requirements. There are two areas in the permit which deviate slightly from Delta Guidance. The first area is in the use of appendices. While appendices are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be tracked (e.g. limits, submittals, etc.), should be in Table A or B. The main reason is that the appendices are word processing documents and are not part of the tracking system. Violations of the conditions listed in the appendices can be enforced, but the computer system will not automatically generate the necessary enforcement notices or documents. Staff must generate these.

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

Appendix II contains printouts from Delta of the control equipment and emissions units descriptions on Forms GI-05A and GI-05B changes that are pre-authorized under the permit. These documents correlate the specific emissions units with specific control equipment and document the capacities of each emissions unit. Delta does not show this information as part of Table A of the permit.

The second area of slight deviation is in determining the VOC content of VOC-containing waste that is shipped off-site. Guidance offers that the permittee sample each shipment to determine the VOC content. Because the permittee does very little

“custom” work, the painting operations, coatings and solvents used by the permittee do not vary significantly over time. The permit requires the permittee to sample a shipment each quarter for the first year and semi-annually thereafter. This will result in the permittee sampling 20 to 25 percent of the total waste during the first year and 10 to 12 percent each year thereafter. For these reasons, the sampling frequency will be adequately representative of all VOC-containing wastes shipped from the facility.

3.6 Insignificant Activities

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The Insignificant activities at this facility are only subject to general applicable requirements. Using the criteria outlined earlier in this TSD, the following table documents the justification for no additional periodic monitoring.

The permit application claimed the activities listed in Table 7 as insignificant activities.

Table 7. Insignificant Activities

Insignificant Activity	Applicable Requirement	Discussion
Space Heaters	<p>40 CFR 52.21, 250 tons of VOC/yr.</p> <p>Minn. R 7011.0515, PM \leq 0.4 lb./MMBtu Opacity \leq 20 %</p>	<p>The facility listed 284 space heaters in its application. The units range in size from 60,000 Btu/hr to 4.32 MMBtu/hr. Minnesota Rules 7007.1300, subp. 4 was cited as the rule under which these emissions units are insignificant activities for a stationary source applying for a part 70 permit. (PTE $<$ 2.28 lb./hr. of NO_x, SO₂, PM, PM₁₀, VOC and O₃) The sum of the heat input rates from these emissions units is 70.1 MMBtu/hr. The potentials to emit of all of these emissions units are:</p> <p>PM – 2.2 tons/yr. PM₁₀ – 2.2 tons/yr. CO – 24.6 tons/yr. VOC – 1.6 tons/yr. SO₂ – 0.2 tons/yr. NO_x – 29.2 tons/yr.</p> <p>All natural gas consumed at the stationary source is metered through a single meter. Therefore, the VOC emissions from these heaters are included in the VOC emissions calculations with all non-insignificant emissions from natural gas combustion.</p> <p>Based on the fuels used (natural gas or LPG) and emission factors published by EPA, it is highly unlikely that these emissions units could violate the requirements of Minn. R. 7011.0515.</p> <p>The list of space heaters is included in Attachment 2 of this TSD.</p>
Welding Operations	<p>Minn. R. 7011.0715, PM, variable and dependent upon airflow.</p> <p>Opacity \leq 20 %</p>	<p>Based on emission factors published by EPA, it is highly unlikely that these emissions units could violate the requirements of Minn. R. 7011.0715. Additionally, these units are operated and vented inside a building, making testing for PM or opacity impossible.</p>

Table 7. Insignificant Activities (continued)

Insignificant Activity	Applicable Requirement	Discussion
Processing Operations: Equipment venting PM/PM ₁₀ inside a building, provided that emissions from the equipment are: a) filtered through an air cleaning system, and b) vented inside of the building 100 % of the time.	Minn. R. 7011.0715, PM, variable and dependent upon airflow. Opacity ≤ 20 %	The permit application listed four total enclosure blasting booths from which the exhausts are filtered and vented back into the building. It is highly unlikely that these emissions units could violate the requirements of Minn. R. 7011.0715. Additionally, these units are operated and vented inside a building, making testing for PM or opacity impossible.

4. Conclusion

Based on the information provided by the McNeilus Truck and Manufacturing, Inc., the MPCA has reasonable assurance that the operation of the emission facility, as described in the Air Emission Permit No. 03900014-001 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: Michael Mondloch, Greg Berger

Attachment: CD-01 Forms
Others specified in section 3

ATTACHMENT 1
POTENTIAL TO EMIT SUMMARY

ATTACHMENT 2

SPACE HEATERS

Number of Heating Units	Description	Total Heat Input (MMBtu/hr)
North Paint Building		
11	90,000 Btu/hr IR heaters	0.99
Former NCI Building		
28	90,000 Btu/hr IR heaters	2.52
1	120,000 Btu/hr IR heaters	0.12
2	490,000 Btu/hr power washer	0.98
1	4 MMBtu/hr heater	4
2	60,000 Btu/hr IR heaters	0.12
R&D Building		
10	90,000 Btu/hr IR heaters	0.9
1	2.7 MMBtu/hr heater	2.7
2	125,000 Btu/hr heaters	0.25
Plants Building		
5	90,000 Btu/hr IR heaters	0.45
4	120,000 Btu/hr IR heaters	0.48
1	60,000 Btu/hr IR heaters	0.06
1	96,000 Btu/hr IR heaters	0.096
T & E Building		
17	90,000 Btu/hr IR heaters	1.53
3	60,000 Btu/hr IR heaters	0.18
5	70,000 Btu/hr IR heaters	0.35
32	120,000 Btu/hr IR heaters	3.84
Main Office		
2	80,000 Btu/hr heaters	0.16
4	100,000 Btu/hr heaters	0.4
1	96,000 Btu/hr heaters	0.096
1	216,000 Btu/hr heaters	0.216
1	70,000 Btu/hr heaters	0.07
1	120,000 Btu/hr heaters	0.12
1	160,000 Btu/hr heaters	0.16
Scale Building		
6	90,000 Btu/hr IR heaters	0.54
Warming Shed		
12	90,000 Btu/hr IR heaters	1.08
1	400,000 Btu/hr space heaters	0.4
1	510,000 Btu/hr power washer	0.51
Paint and Solvent Storage Area		
1	825,000 Btu/hr heaters	0.81
Manufacturing Building		
8	4.32 MMBtu/hr heaters	34.56
35	60,000 Btu/hr IR heaters	3.15
66	90,000 Btu/hr IR heaters	5.94
7	120,000 Btu/hr IR heaters	0.84
8	150,000 Btu/hr IR heaters	1.2
1	90,000 Btu/hr IR heaters	0.09
1	200,000 Btu/hr IR heaters	0.2
Total		70.108

ATTACHMENT 3
DRAFT PERMIT COMMENTS AND RESOLUTIONS

All comments were submitted by McNeilus Truck and Manufacturing, Inc. in a letter dated October 23, 2002.

Comment:

The draft permit authorizes the installation and operation of “3-stage” washers. McNeilus requests that all references to the “3-stage washer” be changed to read “multi-stage” washer.

Response:

The permit, appendices and TSD was changed to read “multi-stage” washer.

Comment:

The draft permit states that it is to be issued to Oshkosh Truck Corporation, the permit should be issued to McNeilus Truck and Manufacturing, Inc. only.

Response:

“Oshkosh Truck Corporation” was deleted from the permit cover page.

Comment:

The draft permit requirement for sampling waste shipments should more clearly require sampling to be conducted on a single shipment each quarter.

Response:

After reviewing records (email and conversations) regarding the VOC content of waste shipped off-site for recycling, we agree that the cited requirement contained a clerical error. Based, in part, on e mail communications of August 12, 2002 in which McNeilus clearly states that VOC-containing waste is shipped much more frequently than quarterly and discussion of the feasibility of collecting and storing a composite sample for as long as three months, the cited permit requirement was changed to read as follows:

2) *The Permittee shall, at a minimum, analyze a composite sample of ~~each~~ a waste shipment to determine the weight content of VOC on a quarterly basis for the first four calendar quarters...*

Comment:

The Monthly Recordkeeping --VOC Emissions requirement for calculating the quantity of VOC used each month erroneously contains the word “waste” in the definition of “A#.”

Response:

The word “waste” was deleted.