

AIR EMISSION PERMIT NO. 16900069- 003

IS ISSUED TO

Avis Industrial Corp.

BADGER EQUIPMENT COMPANY

217 Patneau Drive
Winona, Winona County, MN 55987

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

Permit Type	Action No.	Application Date
Total Facility Reissuance	003	05/03/2005

This permit supersedes Air Emission Permit Nos. 16900069-001 and 002, and 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 are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Pt 70 Reissuance/limits to avoid NSR

Permit Issuance Date: September 10, 2008

Expiration: September 10, 2013

All Title I Conditions do not expire.

Don Smith, Manager
Air Quality Permits Section
Industrial Division

for Brad Moore
Commissioner
Minnesota Pollution Control Agency

TABLE OF CONTENTS

Notice to the Permittee

Permit Shield

Facility Description

Table A: Limits and Other Requirements

Table B: Submittals

Table C: *not used in this permit*

Appendix A: *not used in this permit*

Appendix B: Insignificant Activities Required to be Listed

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:

This facility manufactures cranes and excavators for the construction and mining industries. Steel is cut, cleaned, and fabricated into parts that are painted and assembled. No changes are authorized by this permit action.

This facility is subject to the requirements of National Emission Standards for Hazardous Air Pollutants Subpart MMMM for Surface Coating of Miscellaneous Metal Parts and Products.

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Badger Equipment Co
 Permit Number: 16900069 - 003

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
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
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
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)
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 control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices 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 practices, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subps. 14 and 16(J)
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
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
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
<p>Performance Test Notifications and Submittals:</p> <p>Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.</p> <p>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</p> <p>The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.</p>	Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Badger Equipment Co

Permit Number: 16900069 - 003

Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change.	Minn. R. 7017.2025, subp. 3
MONITORING REQUIREMENTS	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)
RECORDKEEPING	hdr
Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
When the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. For nonexpiring permits, these records shall be kept for a period of five years from the date that the change was made. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format.	Minn. R. 7007.1200, subp. 4
REPORTING/SUBMITTALS	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-3

09/10/08

Facility Name: Badger Equipment Co

Permit Number: 16900069 - 003

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
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)
Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. The Permittee shall submit this on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3100
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

Facility Name: Badger Equipment Co

Permit Number: 16900069 - 003

Subject Item: GP 002 Spray Booth Panel Filters subject to CAM

Associated Items: CE 004 Molded Polystyrene Baffle

CE 005 Molded Polystyrene Baffle

What to do	Why to do it
COMPLIANCE ASSURANCE MONITORING (each requirement applies to each Panel Filter separately)	hdr
The Permittee shall operate and maintain the panel filter (CE 004 and CE 005) at all times that any emission unit controlled by the panel filter (EU 001) is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0700 to 7011.0735
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: greater than or equal to 85 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0700 to 7011.0735
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: greater than or equal to 85 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0700 to 7011.0735
The Permittee shall operate and maintain the panel 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.	40 CFR Section 64.7(b); Minn. R. 7017.0200
Daily Inspections: At least once per 24-hour period, the Permittee shall visually inspect the condition of the panel filter with respect to alignment, saturation, tears, holes and any other matter that may affect the filter's performance. The Permittee shall record the time and date of each inspection and any actions resulting from the inspection. The Permittee shall record periods of non-operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; 40 CFR Section 64.3; Minn. R. 7017.0200
Periodic Inspections: The Permittee shall inspect the control equipment components as required by the manufacturing specifications. The Permittee shall maintain a written record of these inspections.	40 CFR Section 64.3; Minn. R. 7017.0200
Corrective Actions: The Permittee shall take corrective action as soon as possible if the panel filter or any of its components are found during the inspections to need repair. 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 fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for the panel filter.	40 CFR Section 64.7(d); Minn. R. 7017.0200
Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change.	40 CFR Section 64.7(e); Minn. R. 7017.0200
As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64: 1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and 2) Summary information on the number, duration, and cause for monitor downtime incidents.	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200
The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	40 CFR Section 64.9(b); Minn. R. 7017.0200
Initial Hood Certification and Evaluation: Each control device hood must conform to the requirements listed in Minn. R. 7001.0072, subp. 2(B), and the Permittee shall certify this as specified in Minn. R. 7001.0072, subps. 2 and 3. The Permittee shall maintain a copy of the evaluation and certification on site.	Minn. R. 7007.0800, subp. 4, 5 and 14
Initial Performance Test: due 30 days after Permit Issuance for the initial hood certification and evaluation of the hood connected to CE 004 and CE 005. The control device hood must conform to the requirements listed in Minn. R. 7011.0072 subp. 2(B), and the Permittee shall certify this as specified in Minn. R. 7011.0072 subp. 2.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-5**

09/10/08

Facility Name: Badger Equipment Co

Permit Number: 16900069 - 003

Annual Hood Evaluation: The Permittee shall measure and record at least once every 12 months the fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method. The Permittee shall maintain a copy of the annual evaluation on site.

Minn. R. 7007.0800, subp. 4, 5, and 14
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TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Badger Equipment Co

Permit Number: 16900069 - 003

Subject Item: EU 001 Spray Booth; SV 001/002; CE 004/005)

Associated Items: CE 004 Molded Polystyrene Baffle

CE 005 Molded Polystyrene Baffle

SV 001

SV 002

What to do	Why to do it
OPERATIONAL REQUIREMENTS	hdr
Proper Operation and Maintenance: At all times, including periods of startup, shutdown and malfunction, the Permittee shall operate and maintain the emission unit subject to the MACT standard and its associated air pollution control and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.	40 CFR Section 63.6(e)(1)(i); Minn. R. 7011.7000
Malfunctions shall be corrected as soon as practicable after their occurrence.	40 CFR Section 63.6(e)(1)(ii); Minn. R. 7011.7000
EMISSION LIMITS	hdr
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. This applies individually to SV 001 and SV 002.	Minn. R. 7011.0710, subp. 1(A)
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. This applies individually to SV 001 and SV 002.	Minn. R. 7011.0710, subp. 1(B)
HAPs - Organic: less than or equal to 2.6 lbs/gallon of coating solids used during each 12-month compliance period (HAP emission limit).	40 CFR Section 63.3890(b)(1); Minn. R. 7011.8090
COMPLIANCE REQUIREMENTS	hdr
For each compliance period to demonstrate continuous compliance, the Permittee must use no coating for which the organic HAP content (determined using Equation 2) exceeds the HAP emission limit and must use no thinner and/or other additive, or cleaning material that contains organic HAP, determined according to 40 CFR Section 63.3941(a). A compliance period consists of 12 months. Each month, after the end of the initial compliance period described in 40 CFR Section 63.3940, is the end of a compliance period consisting of that month and the preceding 11 months.	40 CFR Section 63.3942(a); Minn. R. 7011.8090
Based on the current and expected operations of the affected source, this permit only includes the compliant material option specified in 40 CFR Section 63.3891(a). If the Permittee later chooses to switch to or add one or both of the other compliance options allowed in the standard, the Permittee shall comply with all applicable portions of 40 CFR pt. 63, subp. MMMM for those options. In addition, the Permittee shall apply for a permit amendment, as appropriate (e.g., to add applicable NESHAP language, for installation of an oxidizer, etc.).	40 CFR Section 63.3891; Minn. R. 7011.8090
The affected source is the collection of all of the items listed below that are used for surface coating of miscellaneous metal parts and products: (1) All coating operations as defined in 40 CFR 63.3981; (2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed; (3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and (4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.	40 CFR Section 63.3882(b); Minn. R. 7011.8090
The Permittee must include all coatings (as defined in 40 CFR Section 63.3981), thinners and/or other additives, and cleaning materials used in the affected source when determining whether the HAP emission rate is equal to or less than the HAP emission limit. To make this determination, the Permittee must use at least one of the three compliance options listed in paragraphs (a) through (c) of 40 CFR Section 63.3891.	40 CFR Section 63.3891; Minn. R. 7011.8090
As stated earlier, this permit only includes the requirements associated with the compliant material option specified in 40 CFR Section 63.3891(a).	

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Badger Equipment Co

Permit Number: 16900069 - 003

<p>Continued: Even so, the Permittee may apply any of the compliance options to an individual coating operation, or to multiple coating operations as a group, or to the entire affected source. The Permittee may use different compliance options for different coating operations, or at different times on the same coating operation. The Permittee may employ different compliance options when different coatings are applied to the same part, or when the same coating is applied to different parts. However, the Permittee may not use different compliance options at the same time on the same coating operation. If the Permittee switches between compliance options for any coating operation or group of coating operations, the Permittee must document this switch as required by 40 CFR Section 63.3930(c), and the Permittee must report it in the next semiannual compliance report listed in Table B of this permit.</p>	<p>40 CFR Section 63.3891; Minn. R. 7011.8090 (cont.)</p>
<p>Compliant Material Option: The Permittee shall demonstrate that the organic HAP content of each coating used in the coating operation(s) is less than or equal to 0.31 kg (2.6 lb) kg organic HAP per liter (gal) coating solids used during each 12-month compliance period, and that each thinner and/or other additive, and cleaning material used contains no organic HAP. The Permittee must meet all the requirements of 40 CFR Sections 63.3940, 63.3941, and 63.3942 to demonstrate compliance with the HAP emission limit using the compliant material option.</p>	<p>40 CFR Section 63.3891(a); Minn. R. 7011.8090</p>
<p>The Permittee must be in compliance with the emission limitations as specified below: 1) Any coating operation(s) for which the Permittee uses the compliant material option or the emission rate without add-on controls option, as specified in 40 CFR Section 63.3891(a) and (b), must be in compliance with the HAP emission limit at all times. 2) The Permittee must always operate and maintain the affected source according to the provisions in 40 CFR Section 63.6(e)(1)(i).</p>	<p>40 CFR Section 63.3900(a)(1) and(b); Minn. R. 7011.8090</p>
<p>Organic HAP Mass Fraction: The Permittee must determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during the compliance period by using one of the following options: 1) Method 311 (appendix A to 40 CFR pt. 63). The Permittee may use Method 311 for determining the mass fraction of organic HAP. To use Method 311, count each organic HAP that is measured to be present at 0.1 percent by mass fraction or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 40 CFR Section 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point;</p>	<p>40 CFR Sections 63.3941(a) and 63.3942(a); Minn. R. 7011.8090</p>
<p>Continued 2) Method 24 (appendix A to 40 CFR pt. 60). For coatings, the Permittee may use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, the Permittee may use the alternative method described in appendix A to 40 CFR pt. 63, subp. PPPP, rather than Method 24. The Permittee may use the volatile fraction that is emitted, as measured by the alternative method in appendix A to 40 CFR pt. 63, subp. PPPP, as a substitute for the mass fraction of organic HAP; 3) Alternative Method. The Permittee may use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. The Permittee must follow the procedure in 40 CFR Section 63.7(f) to submit an alternative test method for approval;</p>	<p>40 CFR Sections 63.3941(a) and 63.3942(a); Minn. R. 7011.8090 (cont)</p>
<p>Continued 4) Information from the supplier or manufacturer of the material. The Permittee may rely on information other than that generated by the previous three paragraphs, such as manufacturer's formulation data, if it represents each organic HAP that is present in 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 40 CFR Section 1910.1200(d)(4) and at 1.0 percent by mass or more for the other compounds. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, the Permittee may rely on manufacturer's data that expressly states the organic HAP or volatile matter mass fraction emitted. If there is a disagreement between such information and the results of a test conducted in according to 40 CFR Section 63.3941(a)(1) through (3), then the test method results will take precedence unless, after consultation you demonstrate to the satisfaction of the MPCA that the formulation data are correct; or</p>	<p>40 CFR Sections 63.3941(a) and 63.3942(a); Minn. R. 7011.8090 (cont)</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Badger Equipment Co

Permit Number: 16900069 - 003

<p>Continued If the tables are used, the values in Table 3 of 40 CFR pt. 63, subp. MMMM for all solvent blends that match the entries according to the instructions for Table 3 may be used, and Table 4 of 40 CFR pt. 63, subp. MMMM may be used only if the solvent blends in materials that are used are known and they do not match any of the solvent blends in Table 3 and it is known only whether the blend is aliphatic or aromatic. However, if the results of a Method 311 (appendix A to 40 CFR pt. 63) test indicate higher values than those listed in Tables 3 or 4, the Method 311 results will take precedence unless, after consultation it is determined to the satisfaction of the MPCA that the formulation data are correct.</p>	<p>40 CFR Sections 63.3941(a) and 63.3942(a); Minn. R. 7011.8090 (cont)</p>
<p>Volume Fraction of Solids: The Permittee must determine the volume fraction of coating solids (liters (gal) of coating solids per liter (gal) of coating) for each coating used during the compliance period by a test, by information provided by the supplier or the manufacturer of the material, or by calculation, as specified in paragraphs (b)(1) through (4) of 40 CFR Section 63.3941. If test results obtained according to paragraph (b)(1) of 40 CFR Section 63.3941 do not agree with the information obtained under paragraph (b)(3) or (4) of 40 CFR Section 63.3941, the test results will take precedence unless, after consultation, it is demonstrated to the satisfaction of the MPCA that the formulation data are correct.</p>	<p>40 CFR Sections 63.3941(b) and 63.3942(a); Minn. R. 7011.8090</p>
<p>Continued (1) ASTM Method D2697-86 (Reapproved 1998), "Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings" (incorporated by reference, see 40 CFR Section 63.14), or ASTM Method D6093-97 (Reapproved 2003), "Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer" (incorporated by reference, see 40 CFR Section 63.14) may be used to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids. (2) An alternative test method for determining the solids content of each coating once the Administrator has approved it. You must follow the procedure in 40 CFR Section 63.7(f) to submit an alternative test method for approval. (3) The volume fraction of coating solids for each coating may be obtained from the supplier or manufacturer.</p>	<p>40 CFR Sections 63.3941(b) and 63.3942(a); Minn. R. 7011.8090 (cont)</p>
<p>Continued (4) Calculation of volume fraction of coating solids. The volume fraction of coating solids may be determined using the following equation (Equation 1): $V_s = 1 - (ms/D_{avg})$ Where: V_s = Volume fraction of coating solids, liters (gal) coating solids per liter (gal) coating. ms = Total volatile matter content of the coating, including HAP, VOCs, water, and exempt compounds, determined according to Method 24 in appendix A of 40 CFR part 60, grams volatile matter per liter coating. D_{avg} = Average density of volatile matter in the coating, grams volatile matter per liter volatile matter, determined from test results using ASTM Method D1475-98, "Standard Test Method for Density of Liquid Coatings, Inks, and Related Products" (incorporated by reference, see 40 CFR Section 63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials.</p>	<p>40 CFR Sections 63.3941(b) and 63.3942(a); Minn. R. 7011.8090 (cont)</p>
<p>Determine the density of each coating. Determine the density of each coating used during the compliance period from test results using ASTM Method D1475-98, "Standard Test Method for Density of Liquid Coatings, Inks, and Related Products" (incorporated by reference, see 40 CFR 63.14), information from the supplier or manufacturer of the material, or specific gravity data for pure chemicals. If there is disagreement between ASTM Method D1475-98 test results and the supplier's or manufacturer's information, the test results will take precedence unless, after consultation it is demonstrated to the satisfaction of the MPCA that the formulation data are correct.</p>	<p>40 CFR Sections 63.3941(c) and 63.3942(a); Minn. R. 7011.8090</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Badger Equipment Co

Permit Number: 16900069 - 003

<p>Determine the organic HAP content of each coating. Calculate the organic HAP content, kg (lb) of organic HAP emitted per liter (gal) coating solids used, of each coating used during the compliance period using the following equation (Equation 2):</p> $H_c = (D_c \cdot W_c) / V_s$ <p>Where:</p> <p>H_c = Organic HAP content of the coating, kg organic HAP emitted per liter (gal) coating solids used.</p> <p>D_c = Density of coating, kg coating per liter (gal) coating, determined according to 40 CFR Section 63.3941 (c).</p> <p>W_c = Mass fraction of organic HAP in the coating, kg organic HAP per kg coating, determined according to 40 CFR Section 63.3941(a).</p> <p>V_s = Volume fraction of coating solids, liter (gal) coating solids per liter (gal) coating, determined according to 40 CFR 63.3941(b).</p>	<p>40 CFR Sections 63.3941(d) and 63.3942(a); Minn. R. 7011.8090</p>
<p>Deviation: If the Permittee chooses to comply with the emission limitations using the compliant material option, the use of any coating, thinner and/or other additive, or cleaning material that does not meet the criteria specified in 40 CFR Section 63.3942(a) is a deviation from the emission limitations that must be reported as specified in 40 CFR Sections 63.3910(c)(6) and 63.3920(a)(5).</p>	<p>40 CFR Section 63.3942(b); Minn. R. 7011.8090</p>
<p>RECORDKEEPING</p>	<p>hdr</p>
<p>Recordkeeping: The Permittee shall maintain files of all information required by this part in a form suitable and readily available for expeditious inspection and review. The files should be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Only the most recent two years of information must be kept on site.</p>	<p>40 CFR Section 63.10(b)(1); Minn. R. 7019.0100, subp. 2(B)</p>
<p>The Permittee shall collect and keep records of the data and information specified below. Failure to collect and keep these records is a deviation from the standard.</p> <ol style="list-style-type: none"> 1) A copy of each notification and report that was submitted to comply with 40 CFR pt. 63, subp. MMMM, and the documentation supporting each notification and report; 2) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP and density for each coating, thinner and/or other additive, and cleaning material, and the volume fraction of coating solids for each coating. If a test was conducted to determine mass fraction of organic HAP, density, or volume fraction of coating solids, keep a copy of the complete test report. If the information provided by the manufacturer or supplier that was based on testing was used, keep the summary sheet of results provided by the supplier. 	<p>40 CFR Sections 63.3930 and 63.3942(d); Minn. R. 7011.8090</p>
<p>Continued</p> <p>The Permittee is not required to obtain the test report or other documentation from the manufacturer or supplier;</p> <ol style="list-style-type: none"> 3) A record of the coating operations on which the Permittee used each compliance option and the time periods (beginning and ending dates) for each option that was used; 4) For the compliant material option, a record of the calculation of the organic HAP content for each coating, using Equation 2 in this permit; 5) A record of the name and mass of each coating, thinner and/or other additive, and cleaning material used during each compliance period. Purchase records for each material used may be kept instead of recording the volume used during each compliance period; 	<p>40 CFR Sections 63.3930 and 63.3942(d); Minn. R. 7011.8090 (cont)</p>
<p>Continued</p> <ol style="list-style-type: none"> 6) A record of the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each compliance period unless the material is tracked by weight. 7) A record of the volume fraction of coating solids for each coating used during each compliance period. 8) Records of the date, time and duration of each deviation. 	<p>40 CFR Sections 63.3930 and 63.3942(d); Minn. R. 7011.8090 (cont)</p>
<p>The Permittee's records must be in a form suitable and readily viewable for expeditious review according to 40 CFR Section 63.10(b)(1). Where appropriate, the records may be maintained as electronic spreadsheets or as a database. As specified in 40 CFR Section 63.10(b)(1), each record must be kept for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The record must be kept on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to 40 CFR Section 63.10(b)(1). The remaining records may be kept off-site for the remaining 3 years.</p>	<p>40 CFR Sections 63.3931 and 63.3942(d); Minn. R. 7011.8090</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Badger Equipment Co

Permit Number: 16900069 - 003

SUBMITTALS	hdr
<p>Semiannual Compliance Report Content: The semiannual compliance report must contain the following information:</p> <ul style="list-style-type: none"> i) Company name and address. ii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. iii) Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation. iv) Identification of the compliance option or options specified in 40 CFR Section 63.3891 that was used on each coating operation during the reporting period. If the compliance option was changed during the reporting period, the report must contain beginning and ending dates for each option that was used. 	<p>40 CFR Section 63.3920(a)(3); Minn. R. 7011.8090</p>
<p>If there were no deviations from the emissions limitations in 40 CFR Sections 63.3890, 63.3892, and 63.3893 that apply, the semiannual compliance report must contain a statement that there were no deviations from the emission limitations during the reporting period.</p>	<p>40 CFR Section 63.3920(a)(4); Minn. R. 7011.8090</p>
<p>Deviation Report Requirement: If there was a deviation from the applicable organic HAP content requirements in 40 CFR Section 63.3890, the semiannual compliance report must contain the following information:</p> <ul style="list-style-type: none"> i) Identification of each coating used that deviated from the applicable emission limit, and each thinner and/or other additive, and cleaning material used that contained organic HAP, and the dates and time periods each was used. ii) The calculation of the organic HAP content (using Equation 2 of this permit) for each coating identified in item (i) above. The Permittee does not need to submit background data supporting this calculation. iii) The determination of mass fraction of organic HAP for each thinner and/or other additive, and cleaning material identified in item (i) above must also be included in this report. The Permittee does not need to submit background data supporting this calculation. iv) A statement of the cause of each deviation. 	<p>40 CFR Section 63.3920(a)(5); Minn. R. 7011.8090</p>

TABLE B: SUBMITTALS

B-1 09/10/08

Facility Name: Badger Equipment Co
Permit Number: 16900069 - 003

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.

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

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:

AQ Permit Technical Advisor
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

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.

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

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

AQ Compliance Tracking Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

B-2 09/10/08

Facility Name: Badger Equipment Co

Permit Number: 16900069 - 003

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

B-3 09/10/08

Facility Name: Badger Equipment Co

Permit Number: 16900069 - 003

What to send	When to send	Portion of Facility Affected
Semiannual Compliance Report	due 31 days after end of each calendar half-year starting 02/01/2008. The report shall contain the information specified in Table A of this permit under EU 001. The first semiannual compliance report must cover the first semiannual reporting period which begins 2/1/08 and ends on 6/30/08 and be submitted by July 31, 2008. Each subsequent semiannual compliance report must cover the subsequent semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. This report may be submitted with the Semiannual Deviations Report also listed in Table B of this permit.	EU001
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). The Permittee shall submit this on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX B**Facility Name:** Badger Equipment Company**Permit Number:** 16900069-003**Insignificant Activities and Applicable Requirements**

Minn. R.	Rule Description of the Activity	Applicable Requirement
Minn. R. 7007.1300, subp. 3(A)	Fuel use: space heaters fueled by kerosene, natural gas, or propane. A space heater is a heating unit that is not connected to piping or ducting to distribute the heat. Facility is heated by natural gas space heaters.	Minn. R. 7011.0515
Minn. R. 7007.1300, subp.3(l)(2)	Individual emission units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than 2,000 pounds per year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, VOCs (including hazardous air pollutant-containing VOCs), and ozone. Parts washer – VOC potential emissions less than 2,000 lb/year.	Minn. R. 7011.0715
Minn. R. 7007.1300, subp. 3(H)(3)	Miscellaneous: brazing, soldering or welding equipment; Facility performs some welding activities.	Minn. R. 7011.0710/0715
Minn. R. 7007.1300, subp. 3(J)	Fugitive Emissions from roads and parking lots. Facility has unpaved roads.	Minn. R. 7011.0150
Minn. R. 7008.4110	Conditionally insignificant PM And PM10 emitting operations Facility has a blasting booth with controls that meet the requirements.	Minn. R. 7011.0715

TECHNICAL SUPPORT DOCUMENT
For
BADGER EQUIPMENT CO.
AIR EMISSION PERMIT NO. 16900069-003

This technical support document is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp.1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the preliminary determination to issue the permit.

1 General Information

1.1 Applicant and Stationary Source Location

Applicant/Address	Stationary Source/Address (SIC Code: 4911)
Avis Industrial Corporation PO Box 548 1909 South Main Street Upland, IN 46989	Badger Equipment Company 217 Patneaude Drive Winona, MN 55987 Winona County
	Contact: T. A. Lee Phone: (507) 454-1563

1.2 Description of the Permit Action

Emissions from the Badger Equipment facility are primarily volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) from painting activities. The facility manufactures cranes and excavators for the construction and mining industries. Steel is cut, cleaned, and fabricated into parts that are painted and assembled.

1.3 Description of any Changes Allowed with this Permit Issuance

No changes are authorized by this permit action.

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

Air emission permit No. 16900069-002 was an administrative amendment to implement the 2001 MPCA air dispersion modeling policy and imposed additional requirements on the Permittee.

1.5 Facility Emissions

Table 1 - Total Facility Potential to Emit Summary

	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Single HAP* tpy	All HAPs tpy
Total Facility Potential Emissions	263.2	263.2	0.00	0.00	0.00	227.8	46.92	54.54
Total Facility Limited Potential Emissions	92.1	92.1	0.00	0.00	0.00	227.8	46.92	54.54
Total Facility Actual Emissions (2006)	0.01	0.01	0.00	0.01	0.01	2.80	HAPs not reported in emission inventory	

tpy - tons per year; *2-Butoxyethyl Acetate

Table 2 - Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		PM, PM ₁₀	VOC, SO ₂ , NO _x , CO, Pb
Part 70 Permit Program	VOC	PM ₁₀	SO ₂ , NO _x , CO, Pb
Part 63 NESHAP	MMMM		

1.6 Changes to Permit

The following types of changes have been made to the permit:

- incorporated requirements for 40 CFR, pt. 63 subp. MMMM;
- updated to reflect current MPCA templates and standard citation formatting;
- updated control efficiencies for control equipment;
- completed requirements have been removed;
- requirements for equipment that has been removed have been deleted;
- hood certification and evaluation requirements have been added;
- some requirements have been reordered or applied at a different level to help with clarity; and
- compliance assurance monitoring (CAM) has been added for the units subject to this rule.

2 Regulatory and/or Statutory Basis

2.1 New Source Review

The facility is an existing minor source under New Source Review (NSR) regulations. Under the applicable NSR regulation, Prevention of Significant Deterioration (PSD), 40 CFR § 52.21, if the potential emissions of at least one criteria pollutant are above 250 tpy, the source is classified as major.

2.2 Part 70 Permit Program

The facility is a major source under the Part 70 permit program because potential emissions of one or more pollutants (VOCs) exceed the 100 tpy threshold.

2.3 New Source Performance Standards (NSPS)

The Permittee has stated that there are no NSPS applicable to the operations at this facility.

2.4 National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a major source of HAPs, and therefore subject to 40 CFR pt. 63, subp. Mmmm for Surface Coating of Miscellaneous Metal Parts and Products. The Permittee has stated that no additional NESHAP apply at this time.

2.5 Compliance Assurance Monitoring

The Facility has one spray booth which is subject to CAM (40 CFR pt. 64). The pre-control potential emissions of the spray booth are greater than 100 tpy (PM), and control equipment (panel filters) is used to comply with an emissions limit or standard (IPER). The potential post-control emissions are less than 100 tpy; therefore, the unit is considered other (vs. large) pollution-specific emissions units (PSEUs).

2.6 Minnesota Standards of Performance

Portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.0710 Standards of Performance for Pre-1969 Industrial Process Equipment Rule (IPER)
- Minn. R. 7007.0800 Air Pollution Control Equipment Requirements.

Table 3 - Regulatory Overview of Facility

EU/GP	Applicable Regulations	Comments:
EU 001	Minn. R. 7011.0710 40 CFR pt. 63, subp. MMMM	Standards of Performance for Pre-1969 Industrial Process Equipment Rule (IPER) limits particulate emissions National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products. This is an existing major source of HAPS and uses compliant materials to meet the requirements of this subpart.
GP 002*	Title I limit to avoid New Source Review Minn. R. 7007.0800 40 CFR pt. 64	Emissions limited below NSR threshold through complying with the IPER particulate limit Air Pollution Control Equipment Requirements Compliance Assurance Monitoring. The panel filters are used to comply with the IPER particulate limit, and the uncontrolled potential from this booth is greater than 100 tpy, so CAM applies.

*There is no GP 001 in the permit; it was deleted through this permit action.

3 Technical Information

3.1 Total Facility

This source is an existing major source under part 70 for VOCs and HAPs. This source is a synthetic minor source for PM under PSD and for PM₁₀ under PSD and part 70. The facility has taken limits to meet the particulate emissions limit from IPER and to make it non-major for PM and PM₁₀. Potential emissions of VOCs and HAPs are high, but actual emissions are low. All HAPs emitted are VOCs, and as indicated in Table 1, actual VOC emissions were approximately 3 tons in 2006.

EU 001 - Spray Booth (formerly GP 002, EU 001-009, and EU 097-099)

The spray booth has two gun ports, however only one gun can be operated at a time due to space constraints. The facility sold one of its two buildings which had spray booths; as a result some spray guns were removed from the facility. All spray guns have been removed from the permit, and emissions from the spray guns are calculated from the spray booth using the gun with the highest flow rate.

Painting clean-up emission units (EU 097, 098, and 099) have been removed from the permit; previously they were regarded independent of emissions from EU 001-009 although they were never separate emission units. Therefore, EU 002-009 and EU 097-099 have been removed from the permit and the emissions are calculated under EU 001.

The worst case emissions are based on calculations from both painting and clean up. Spray coating potential emission calculations do not reflect any paint waste or solvent recycling because these activities are not required by the permit.

GP 001 - Formerly Space Heating Equipment

GP 001 has been removed from the permit because the space heating equipment is an insignificant activity. The facility replaced all heating equipment with natural gas radiant space heaters.

GP 002 - Spray Booth Filters (CE 004 and CE 005)

GP 002 was formerly assigned to the group of spray guns but is now control equipment for the spray booth, two panel filters (CE 004 and CE 005) operated in parallel. GP 002 is required to maintain a 68% overall capture and control efficiency for PM and PM₁₀ to meet the requirements of Minn. R. 7011.0710 and because credit for the control efficiency is given in calculating emission fees.

3.2 Calculations of Potential to Emit

Attachment 1 to this TSD contains a summary the PTE of the Facility and contains detailed spreadsheets and supporting information prepared by the MPCA and the Permittee.

3.3 Periodic Monitoring

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

In evaluating the monitoring included in the permit, the MPCA considers the following:

- The likelihood of violating the applicable requirements;
- Whether add-on controls are necessary to meet the emission limits;
- The variability of emissions over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic feasibility of possible periodic monitoring methods; and

- The kind of monitoring found on similar units elsewhere.

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

Table 4 - Periodic Monitoring

EU/ GP	Emission limit (Basis)	Additional Monitoring	Discussion
EU 001 (spray booth)	PM: 0.30 gr/dscf Opacity: < 20 % (Minn. R. 7011.0710) HAP requirements (40 CFR, pt. 63 subp. MMMM)	see GP 002 for monitoring None	NESHAP requirements are considered adequate monitoring.
GP 002 (fabric filters)	PM/PM ₁₀ : Control Efficiency of 85% (limit to meet IPER) (Title I to avoid NSR) (Minn. R. 7007.0800)	Recordkeeping, O&M, inspections Initial hood evaluation and certification	Monitoring based on the Minnesota Performance Standard for Control Equipment is adequate to have a reasonable assurance of compliance (daily and periodic inspections, corrective actions, and O&M). Standard hood certification and evaluation requirements have been added to this permit – they were previously left out. This hood has not yet been evaluated. The permit gives the facility 30 days after permit issuance to complete this evaluation and certification.

3.4 Insignificant Activities

The facility has several operations which are classified as insignificant activities. These are listed in Appendix B to the permit.

Parts Washer - Parts Washers EU 033 – 040 and EU 042 have been removed from the Facility. The remaining parts washer, EU 0041, has been removed from the list of emission units at the facility since it is an insignificant activity. The parts washer is insignificant under Minn. R. 7007.1300, subp. 3(I)(2).

Grit Blasting - Blasting is fully enclosed, filtered through an air cleaning system, and vents indoors 100 percent of the time. Blasting meets the requirements to be conditionally insignificant under Minn. R. 7008.4110, and therefore is not included as an emission source. Additionally the control equipment associated with blasting (CE 001, 002, and 003) has been removed from the permit but not from the facility.

Welding activities - Approximately 20 of the 49 listed welding units at the facility have been removed from the facility. Welding units, previously EU 046 - EU 095, and flame tables, previously EU 043 - EU 045, have been removed from the list of emission units at the Facility because they are insignificant activities. Flame tables have 5 or 6 torches and are used to cut thick sheet steel. Welding is insignificant under Minn. R. 7007.1300, subp. 3(H)(3).

Space heaters - All of the heating units in the remaining main building of the facility have been replaced with radiant space heaters. The space heaters are insignificant under Minn. R. 7007.1300, subp. 3(A).

Unpaved roads – The permittee must take reasonable precautions to prevent the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate. Unpaved roads are insignificant under Minn. R. 7007.1300, subp. 3(J).

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. Using the criteria outlined earlier in this TSD, the following table documents the justification why no additional periodic monitoring is necessary for the current insignificant activities. See Attachment 1 of this TSD for PTE information for the insignificant activities.

Table 5 - Insignificant Activities

Insignificant Activity	General Applicable Emission limit	Discussion
Fuel use: space heaters fueled by, kerosene, natural gas, or propane	PM \leq 0.6 or 0.4 lb/MMBtu, depending on year constructed Opacity \leq 20% with exceptions (Minn. R. 7011.0515)	For these units, based on the fuels used and EPA published emissions factors, it is highly unlikely that it could violate the applicable requirement. In addition, these types of units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.
Individual units with actual emissions less than 2,000 lb/year of certain pollutants	PM, variable depending on airflow Opacity \leq 20% with exceptions (Minn. R. 7011.0715)	The facility has one parts washer; it is highly unlikely that they could violate the applicable requirement. In addition, this unit is operated and vented inside a building, so testing for PM or opacity is not feasible.
Miscellaneous: brazing, soldering, or welding equipment	PM, variable depending on airflow Opacity \leq 20% with exceptions (Minn. R. 7011.0715)	The facility performs welding; it is unlikely enough emissions would be generated to violate the applicable requirement, and measurement of the emissions is not feasible.
Fugitive Emissions from unpaved roads and parking lots	Requirement to take reasonable measures to prevent PM from becoming airborne (Minn. R. 7011.0150)	The Facility is located outside the Metro area and some surfaces are currently paved. The permit contains a general requirement that this standard must be met.
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	PM, variable depending on airflow Opacity \leq 20% (Minn. R. 7011.0715)	This is a grit blasting booth that is vented inside the building. The calculated PTE for these units is significantly less than the applicable limits. In addition, these units are vented inside a building, so testing for PM or opacity is not feasible.

3.5 Permit Organization

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

3.6 Comments Received

Public Notice Period: July 16, 2008 – August 14, 2008

EPA 45-day Review Period: July 16, 2008 – August 29, 2008

Comments were not received from the public during the public notice period.

Comments were not received from EPA during their review period.

4 Conclusion

Based on the information provided by Badger Equipment Company, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 16900069-003 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: Adriane Lenshek (permit writer/engineer)
Sarah Kilgriff (enforcement)
Sean O'Connor (stack testing)
Peggy Bartz (peer reviewer)

AQ File No. 3175; DQ 454

Attachments: 1. PTE Summary and Calculation Spreadsheets
 2. Compliance Assurance Monitoring Plan
 3. Facility Description and CD-01 Forms

Attachment 1 - PTE Summary and Calculation Spreadsheets



Calculation.pdf

Attachment 2 - Compliance Assurance Monitoring Plan



CAM Plan.pdf

Attachment 3 - Facility Description and CD-01 Forms