

**AIR EMISSION PERMIT NO. 12300707- 003**

**IS ISSUED TO**

Viking Drill & Tool Inc

**VIKING DRILL & TOOL INC**

355 State Street  
St. Paul, Ramsey County, MN 55107

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):

<u>Permit Type</u>	<u>Application Date</u>
Total Facility Operating Permit - Reissuance	12/07/2005

This permit supersedes permit number 123707-002 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; Part 70 Reissuance/True Minor for NSR

**Issue Date:** June 25, 2008

**Expiration:** June 25, 2013

All Title I Conditions do not expire.

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Jeff J. 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**

**Appendix A: Insignificant Activities and Applicable Requirements**

**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:**

Viking Drill & Tool, Inc. is a manufacturer of drill bits. The primary source of emissions, Volatile Organic Compounds and Hazardous Air Pollutants (HAP), at the facility is the vapor degreaser, which is subject to 40 CFR pt. 63, Subpart T; National Emission Standards for Halogenated Solvent Cleaning Equipment. The HAP is trichloroethylene. There is one wet scrubber on site for the two salt bath lines, one of which is a backup, and both lines are considered insignificant activities. The facility is a major source for Part 70 and a non-major source for Prevention of Significant Deterioration. All emission units except the vapor degreaser are considered insignificant activities.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-1

06/25/08

Facility Name: Viking Drill &amp; Tool Inc

Permit Number: 12300707 - 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**

<b>What to do</b>	<b>Why to do it</b>
<b>OPERATIONAL REQUIREMENTS</b>	hdr
Ambient Air Quality Standards: 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)
General Conditions: The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
<b>MONITORING REQUIREMENTS</b>	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)
<b>RECORDKEEPING</b>	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)

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-2**

06/25/08

Facility Name: Viking Drill &amp; Tool Inc

Permit Number: 12300707 - 003

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)
REPORTING/SUBMITTALS	hdr
<p>Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3.</p> <p>At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.</p>	Minn. R. 7019.1000, subp. 3
<p>Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.</p> <p>At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.</p>	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
<p>Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description:</p> <ol style="list-style-type: none"> <li>1. the cause of the deviation;</li> <li>2. the exact dates of the period of the deviation, if the deviation has been corrected;</li> <li>3. whether or not the deviation has been corrected;</li> <li>4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and</li> <li>5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.</li> </ol>	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****A-3**

06/25/08

Facility Name: Viking Drill &amp; Tool Inc

Permit Number: 12300707 - 003

**Subject Item: EU 027 Vapor Degreaser**

What to do	Why to do it
EMISSION LIMIT	hdr
Trichloroethylene: less than or equal to 31085 lbs/year using 12-month Rolling Sum to be calculated by the 1st operating day of each calendar month for the previous 12-month period as described later in this permit effective May 3, 2010.	40 CFR Section 63.471(b)(2); Minn. R. 7011.7200
DESIGN REQUIREMENTS	hdr
Freeboard Ratio: The vapor degreaser shall have a freeboard ratio of 1.0 or greater. This meets the requirements of 40 CFR section 63.463(a)(2) which requires a freeboard ratio of 0.75 or greater.	40 CFR Section 63.463(b)(2)(i); Minn. R. 7011.7200
Parts Handling System: The degreaser must have an automated parts handling system capable of moving parts or parts baskets at a speed of 11 feet per minute or less from the initial loading of parts through removal of cleaned parts.	40 CFR Section 63.463(a)(3); Minn. R. 7011.7200
Sump Liquid Level: The degreaser must be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils.	40 CFR Section 63.463(a)(4); Minn. R. 7011.7200
Vapor Level Control: The degreaser must be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.	40 CFR Section 63.463(a)(5); Minn. R. 7011.7200
Primary Condenser: The degreaser must be equipped with a primary condenser.	40 CFR Section 63.463(a)(6); Minn. R. 7011.7200
Carbon Adsorber: If the degreaser uses a lip exhaust, it shall be operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber meeting the requirements of 40 CFR Section 63.643(e)(2)(vii).	40 CFR Section 63.643(a)(7); Minn. R. 7011.7200
WORK PRACTICE STANDARDS	hdr
Air Disturbances: The Permittee shall control air disturbances across the degreaser opening(s) by using a reduced room draft as described in Section 63.463(e)(2)(ii).	40 CFR Section 63.463(d)(1)(ii); Minn. R. 7011.7200
Solvent/Air Interface: The parts basket or the parts being cleaned shall not occupy more than 50 percent of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 3 feet per minute or less.	40 CFR Section 63.463(d)(2); Minn. R. 7011.7200
Spraying: Any spraying operations shall be done within the vapor zone or within a section of the degreaser that is not directly exposed to the ambient air.	40 CFR Section 63.463(d)(3); Minn. R. 7011.7200
Parts Orientation: Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being removed from the degreaser unless an equally effective approach has been approved by the Administrator.	40 CFR Section 63.463(d)(4); Minn. R. 7011.7200
Parts Dripping: Parts baskets or parts shall not be removed from the degreaser until dripping has stopped.	40 CFR Section 63.463(d)(5); Minn. R. 7011.7200
Startup: During startup of the degreaser, the primary condenser shall be turned on before the sump heater.	40 CFR Section 63.463(d)(6); Minn. R. 7011.7200
Shutdown: During shutdown of the degreaser, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.	40 CFR Section 63.463(d)(7); Minn. R. 7011.7200
Solvent Additions: When solvent is added or drained from the degreaser, the solvent shall be transferred using threaded or other leakproof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.	40 CFR Section 63.463(d)(8); Minn. R. 7011.7200
Control Maintenance: The degreaser and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturer.	40 CFR Section 63.463(d)(9); Minn. R. 7011.7200
Appendix A: Each operator of a solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning procedures in 40 CFR Section 63, subp. T, appendix A, if requested during an inspection by the Administrator.	40 CFR Section 63.463(d)(10); Minn. R. 7011.7200
Closed Containers: Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.	40 CFR Section 63.463(d)(11); Minn. R. 7011.7200
Prohibited Materials: Sponges, fabric, wood, and paper products shall not be cleaned in the degreaser.	40 CFR Section 63.463(d)(12); Minn. R. 7011.7200

**TABLE A: LIMITS AND OTHER REQUIREMENTS**
**A-4**

06/25/08

Facility Name: Viking Drill &amp; Tool Inc

Permit Number: 12300707 - 003

Clean Liquid Solvent: The permittee shall, on the first operating day of every calendar month, ensure that each solvent cleaning machine system contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used solvent that has been cleaned of soiled materials. A fill line must be indicated during the first month the measurements are made. The solvent level within the machine must be returned to the same fill-line each month, immediately prior to calculating monthly emissions as specified in paragraphs (c)(2) and (3) of this section. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.	40 CFR Section 63.471(c)(1); Minn. R. 7011.7200
COMPLIANCE REQUIREMENTS	hdr
Reduced Room Draft: The Permittee shall ensure that the flow or movement of air across the top of the freeboard area of the degreaser or within the degreaser enclosure does not exceed 50 feet per minute at any time.  Establish and maintain the operating conditions under which the wind speed was demonstrated to be 50 feet per minute or less as described in 40 CFR 63.466(d).  If any requirement is not met, determine if an exceedance has occurred using the criteria of Section 63.463(e)(3).	40 CFR Section 63.463(e)(2)(ii); 40 CFR Section 63.463(b)(2)(i); 40 CFR Section 63.463(e)(3); Minn. R. 7011.7200
Superheated Vapor System: The Permittee shall  (A) Ensure that the temperature of the solvent vapor at the center of the superheated vapor zone is at least 10 degrees F above the solvents boiling point.  (B) Ensure that the manufacturer's specifications for determining the minimum proper dwell time within the superheated vapor system is followed.  (C) Ensure that parts remain within the superheated vapor for at least the minimum proper dwell time.  If any requirement is not met, determine if an exceedance has occurred using the criteria of Section 63.463(e)(3).	40 CFR Section 63.463(b)(2)(i); 40 CFR Section 63.463(e)(2)(vi); Minn. R. 7011.7200
Exceedance: If the above facility-wide emission limit is not met, an exceedance has occurred. The Permittee shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in Section 63.468(h)	40 CFR Section 63.463(e)(4); 40 CFR Section 63.471(d); Minn. R. 7011.7200
MONITORING REQUIREMENTS	hdr
Weekly Temperature Monitoring: The Permittee shall use a thermometer or thermocouple to measure the temperature at the center of the superheated solvent vapor zone while the solvent cleaning machine is in the idling mode. The temperature shall be monitored and the results recorded at least once every seven days.	40 CFR Section 63.466(a)(2); 40 CFR Section 63.466(a); Minn. R. 7011.7200
Reduced Room Draft: The Permittee shall conduct an initial monitoring test and, thereafter, calendar monthly monitoring tests of the wind speed within the enclosure using the procedure specified in (i) and (ii) below and a calendar monthly visual inspection of the enclosure to determine if it is free of cracks, holes and other defects. (i) Determine the direction of the wind current in the enclosure by slowly rotating a velometer inside the entrance to the enclosure until the maximum speed is located. (ii) Record the maximum wind speed.	40 CFR Section 63.466(d)(2); Minn. R. 7011.7200
RECORDKEEPING REQUIREMENTS	hdr
Monthly Solvent Emissions Equation: The permittee shall, on the first operating day of the calendar month, using the records of all solvent additions and deletions for the previous month, determine solvent emissions (Eunit) from each solvent cleaning machine using the following equation:  Eunit= SA - LSR - SSR	40 CFR Section 63.471(c)(2); Minn. R. 7011.7200
Where:  Eunit = The total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent month (pounds of solvent per month) SA = The total amount of halogenated HAP liquid solvent added to the solvent cleaning machine during the most recent month (pounds of solvent per month) LSR = The total amount of halogenated HAP liquid solvent removed from the solvent cleaning machine during the most recent month (pounds of solvent per month) SSR = The total amount of halogenated HAP solvent removed from the solvent cleaning machine in solid waste, obtained as described in paragraph (c)(3) of this section, during the most recent month (pounds of solvent per month)	continued from above

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

06/25/08

Facility Name: Viking Drill &amp; Tool Inc

Permit Number: 12300707 - 003

<p>Solid Solvent Removed (SSR): The permittee shall, on the first operating day of the calendar month, determine SSR using the method specified in paragraph (c)(3)(i) or (c)(3)(ii) of this section.</p> <p>(i) From tests conducted using EPA reference method 25d.</p> <p>(ii) By engineering calculations included in the compliance report.</p>	40 CFR Section 63.471(c)(3); Minn. R. 7011.7200
<p>12-month rolling total (unit): The permittee shall on the first operating day of the calendar month, determine the 12-month rolling unit total emissions, EunitTotal, for the 12-month period ending with the most recent month for all units using a halogenated HAP solvent, using the equation below:</p> <p>EunitTotal = Sum (Eunit1 + Eunit2 + . . . + Eunit12)</p> <p>Where:</p> <p>EunitTotal= The total halogenated HAP solvent emissions for a particular unit over the preceding 12 months (pounds)</p> <p>Eunit1= The total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent month (pounds of solvent per month)</p> <p>Eunit2 + . . . + Eunit12 = The total halogenated HAP solvent emissions from the solvent cleaning machine from the previous 11 months (pounds)</p>	40 CFR Section 63.471(c)(4); Minn. R. 7011.7200
<p>12-month rolling total (facility): The permittee shall on the first operating day of the calendar month, determine the 12-month rolling total emissions for the facility, ETotal, for the 12-month period ending with the most recent month using the equation below:</p> <p>ETotal = Sum (Eunit1Total + Eunit2Total + . . . + Eunit(n)Total)</p> <p>Where:</p> <p>ETotal= The total halogenated HAP solvent emissions for the facility over the preceding 12 months (pounds)</p> <p>Eunit(n)= The total halogenated HAP solvent emissions from a solvent cleaning machine during the most recent month (pounds of solvent per month)</p>	40 CFR Section 63.471(c)(5); Minn. R. 7011.7200
<p>Solvent Additions/Deletions Log: The permittee shall maintain a log of solvent additions and deletions for each solvent cleaning machine.</p>	40 CFR Section 63.471(b)(1); Minn. R. 7011.7200
<p>Recordkeeping: The permittee shall maintain the following records in written or electronic form, for the lifetime of the degreaser:</p> <p>(1) Owner's manuals, or if not available, written maintenance and operating procedures, for the degreaser and control equipment.</p> <p>(2) The date of installation for the degreaser and all of its control devices.</p> <p>(3) (not applicable)</p> <p>(4) (not applicable)</p> <p>(5) Records of the halogenated HAP solvent content for each solvent used in the machine.</p>	40 CFR Section 63.467(a); Minn. R. 7011.7200
<p>Recordkeeping: The permittee shall maintain the following records, in written or electronic form, for a period of 5 years:</p> <p>(1) The results of any required control device monitoring.</p> <p>(2) Information on the actions taken to comply with the applicable requirements of Sections 63.463(e) or (f), including records or written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.</p> <p>(3) Estimates of annual solvent consumption for each degreaser.</p>	40 CFR Section 63.467(b); Minn. R. 7011.7200



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-6**

06/25/08

Facility Name: Viking Drill &amp; Tool Inc

Permit Number: 12300707 - 003

Recordkeeping: The permittee shall maintain records specified in paragraphs (1) through (3) of this section either in electronic or written form for a period of 5 years. For purposes of this paragraph, "each solvent cleaning machine" means each solvent cleaning machine that is part of an affected facility regulated by this section.

(1) The dates and amounts of solvent that are added to each solvent cleaning machine.

(2) The solvent composition of wastes removed from each solvent cleaning machines as determined using the procedure described in paragraph (c)(3) of this section.

(3) Calculation sheets showing how monthly emissions and the 12-month rolling total emissions from each solvent cleaning machine were determined, and the results of all calculations.

40 CFR Section 63.471(e); Minn. R. 7011.7200

## TABLE B: SUBMITTALS

B-1 06/25/08

Facility Name: Viking Drill & Tool Inc  
Permit Number: 12300707 - 003

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 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

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

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

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:

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** 06/25/08

Facility Name: Viking Drill &amp; Tool Inc

Permit Number: 12300707 - 003

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Notification	<p>due before 05/03/2010. The notification shall be an initial statement of compliance and shall include:</p> <p>(1) The name and address of the owner or operator of the affected facility.</p> <p>(2) The address ( i.e. , physical location) of each solvent cleaning machine that is part of an affected facility regulated by this section.</p> <p>(3) The results of the first 12-month rolling total emissions calculation.</p>	EU027

**TABLE B: RECURRENT SUBMITTALS****B-3** 06/25/08

Facility Name: Viking Drill &amp; Tool Inc

Permit Number: 12300707 - 003

What to send	When to send	Portion of Facility Affected
Report	<p>due 30 days after end of each calendar half-year starting 12/02/1994 (Exceedance Report), unless a different frequency is required as described in 40 CFR Section 63.468(h) or (i). The exceedance report shall include:</p> <p>(1) Information on the actions taken to comply with 40 CFR Section 63.463(e) and (f), including records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.</p> <p>(2) If an exceedance has occurred, the reason for the exceedance and a description of the actions taken.</p> <p>(3) If no exceedances have occurred, or if a piece of equipment has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.</p>	EU027
Semiannual Deviations Report	<p>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.</p>	Total Facility
Compliance Certification	<p>due 30 days after end of each calendar year following Permit Issuance (for the previous calendar year). The Permittee shall submit this to the Commissioner on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year.</p>	Total Facility
Report	<p>due 31 days after end of each calendar year starting 05/03/2010. The permittee shall submit a solvent emission report every year. This solvent emission report shall contain the requirements specified in paragraphs (1) through (3) of this section.</p> <p>(1) The average monthly solvent consumption for the affected facility in pounds per month.</p> <p>(2) The 12-month rolling total solvent emission estimates calculated each month using the method as described in paragraph (c) of this section.</p> <p>(3) This report shall be combined with the annual report required in Sec. 63.468(f) and (g) into a single report for each facility.</p>	EU027
Report	<p>due 31 days after end of each calendar year starting 12/02/1994. Report must include the following:</p> <p>(1) A signed statement from the facility owner or his designee stating that "All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass the test required in 40 CFR Section 63.463(d)(10)."</p> <p>(2) An estimate of solvent consumption for each degreaser during the reporting period.</p>	EU027

## APPENDIX MATERIAL

Facility Name: Viking Drill & Tool Inc

Permit Number: 12300707-003

### Insignificant Activities and Applicable Requirements

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

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Applicable Requirement
3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane. <ul style="list-style-type: none"><li><i>Seven natural gas infrared heaters (EU011-EU017, 75,000 Btu each)</i></li></ul>	<ul style="list-style-type: none"><li>Minn. R. 7011.0515</li></ul>
3(H)	Miscellaneous: (3) brazing, soldering, or welding equipment	
	<ul style="list-style-type: none"><li><i>Welding area: One arc welder, one plasma cutter, two oxy-acetylene torches used for occasional plant maintenance</i></li></ul>	<ul style="list-style-type: none"><li>Minn. R. 7011.0715</li></ul>
3(I)	Individual emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than: (1) 4,000 lbs/year of carbon monoxide; and (2) 2,000 lbs/year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, volatile organic compounds (including hazardous air pollutant-containing VOC), and ozone.	
	<ul style="list-style-type: none"><li><i>Twelve individual parts washers, each of which has a PTE less than 2000 lb/year VOC</i></li><li><i>Rust preventative operation uses less than 2000 lb/year VOC two electrostatic oil mist cleaners</i></li><li><i>One process boiler (EU001), 0.6 MMBtu/hr, PTE: 420 lbs/year of CO, 500 lbs/year NOx, All other criteria PTE are under thresholds</i></li><li><i>eleven individual heaters, each of which has PTE less than above thresholds (EU006-EU007, EU010, EU019-EU026)</i></li><li><i>One Trimer wet scrubber for salt bath (EU004)</i></li></ul>	<ul style="list-style-type: none"><li>Minn. R. 7011.0715</li><li>Minn. R. 7011.0715</li><li>Minn. R. 7011.0515</li><li>Minn. R. 7011.0515</li><li>Minn. R. 7011.0715</li></ul>

<b>Minn. R. 7007.1300, subpart</b>	<b>Rule Description of the Activity</b>	<b>Applicable Requirement</b>
3(K)	<ul style="list-style-type: none"> <li>Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities not associated with primary production processes at the stationary source, such as spray painting of buildings, machinery, vehicles, and other supporting equipment.</li> </ul>	<ul style="list-style-type: none"> <li>Minn. R. 7011.0715</li> </ul>

### Conditionally Insignificant Activities

	<b>Rule Description of the Activity</b>	<b>Applicable Requirement</b>
<b>Minn. R. 7008.4100</b>	Total VOC Usage at the stationary source less than 200 gallons or 2000 pounds in each calendar year. See Minn. R. 7008.4100 for recordkeeping and calculation requirements for this activity.	
	<ul style="list-style-type: none"> <li><i>Seven parts washers (using petroleum naphtha)</i></li> </ul>	<ul style="list-style-type: none"> <li>Minn. R. 7011.0715</li> </ul>
<b>Minn. R. 7008.4110</b>	Emissions from equipment venting particulate matter (PM) or particulate matter less than 10 microns (PM-10) inside a building, provided that emissions from the equipment are: <ol style="list-style-type: none"> <li>filtered through an air cleaning system; and</li> <li>vented inside of the building 100% of the time.</li> </ol>	<ul style="list-style-type: none"> <li>Minn. R. 7011.0715</li> </ul>
	<ul style="list-style-type: none"> <li><i>Three Torit air filtration systems</i></li> <li><i>One Mistbuster air filtration system</i></li> </ul>	<ul style="list-style-type: none"> <li>Minn. R. 7011.0715</li> </ul>

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 12300707-003**

This technical support document (TSD) 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 determination to issue the permit.

**1. General Information**

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

Applicant/Address	Stationary Source/Address (SIC Code: 3545)
Viking Drill & Tool Inc. 355 State St. P.O. Box 65278 St. Paul, MN 55107	Viking Drill & Tool Inc. 355 State St St. Paul, MN 55107 Ramsey County
Contact: Paul Wegscheid Phone: 651-268-5180	

**1.2. Description of the Permit Action**

Viking Drill & Tool, Inc. (Facility) is a manufacturer of twist drill bits. The primary source of emissions, Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs), at the Facility is the vapor degreaser, which is subject to 40 CFR pt. 63, Subpart T; National Emission Standards for Halogenated Solvent Cleaning Equipment. The HAP is trichloroethylene. There is one wet scrubber on site for the two salt bath lines, one of which is a backup, and both lines are considered insignificant activities. The Facility is a major source for Part 70 and a minor source for Prevention of Significant Deterioration (PSD). All emission units except the vapor degreaser are considered insignificant activities.

**1.3. Description of any Changes Allowed with this Permit Reissuance**

No specific changes are authorized by this permit.

**1.4. Description of All Amendments Issued Since the Issuance of the Last Total Facility Permit and to be Included in the Part 70 Permit Reissuance**

Permit Number and Issuance Date	Action Authorized
12300707-002 April 11, 2003	Replacement of vapor degreaser.

## 1.5. Facility Emissions:

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

	PM tpy	PM <sub>10</sub> tpy	SO <sub>2</sub> tpy	NO <sub>x</sub> tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	0.32	0.32	0.03	4.19	3.52	15.54	15.54	15.54
Total Facility Actual Emissions for 2007	Neg.	Neg.	Neg.	Neg.	Neg.	9.57	HAPs not reported in emission inventory	

PM = Particulate Matter

SO<sub>2</sub> = Sulfur Dioxide

VOCs = Volatile Organic Compounds

HAP = Hazardous Air Pollutant

PM<sub>10</sub> = PM smaller than 10 microns

NO<sub>x</sub> = Nitrogen Oxides

CO = Carbon Monoxide

Neg. = negligible

**Table 2. Facility Classification**

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD			All
Part 70 Permit Program	HAP		
40 CFR pt.63 NESHAP	HAP		All others

## 2. Regulatory and/or Statutory Basis

### New Source Review



The Facility is a non-major source under 40 CFR §52.21, Prevention of Significant Deterioration.

#### Part 70 Permit Program

The Facility is a major source under Part 70, due to the potential emissions of and the individual HAP (trichloroethylene), and due to the applicability of 40 CFR pt. 63, subp. T.

#### New Source Performance Standards (NSPS)

The Facility is not subject to any of the federal NSPS.

#### Compliance Assurance Monitoring (CAM)

CAM is not applicable because the Pollutant Specific Emission Unit (PSEU) does not have a control device, uncontrolled emissions are below the major source threshold of 100 tons per year, and the PSEU is subject to a MACT standard.

#### National Emission Standards for Hazardous Air Pollutants (NESHAP)

The Facility's degreaser is subject to the work practice standards of 40 CFR pt. 63, subp. T, National Emission Standards for Halogenated Solvent Cleaning. The permit includes the requirements of the compliance options that the Permittee has selected under this standard. No other promulgated NESHAPs apply.

#### Minnesota State Rules

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

- Minn. R. 7011.0515 Standards of Performance for New Indirect Heating Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment

### **Table 3. Regulatory Overview of Facility**

EU, GP, or SV	Applicable Regulations	Comments:
EU001 (IA)	Minn. R. 7007.0515	Standards of Performance for New Indirect Heating Equipment
EU027	40 CFR pt. 63, subp.T	National Emission Standards for Halogenated Solvent Cleaning

### 3. Technical Information

#### 3.1. Calculations of Potential to Emit (PTE)

Attachment 1 to this TSD contains emission calculations for the Facility's insignificant indirect heating equipment. Potential emissions from the degreaser are not necessary for they are limited by a facility wide emissions limit. Compliance with this limit is demonstrated using the equation below based on 40 CFR §63.471:

$$TCE = SA - LSR - SSR$$

Where,

TCE = monthly trichloroethylene emissions (pounds)

SA = total amount of trichloroethylene liquid solvent added to the solvent cleaning machine during the most recent calendar month (pounds)

LSR = total amount of trichloroethylene solvent removed from the solvent cleaning machine during the most recent calendar month (pounds)

SSR = total amount of trichloroethylene solvent removed from the solvent cleaning machine in solid waste, obtained as described in paragraph (c)(3) of 63.471, during the most recent calendar month (pounds)

#### 3.2. Periodic Monitoring for Emission Unit

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 Minnesota Pollution Control Agency (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**

<b>Emission Unit or Group</b>	<b>Requirement (basis)</b>	<b>Additional Monitoring</b>	<b>Discussion</b>
EU027	Trichloroethylene: Less than or equal to 31,085 lbs using 12-Month Rolling Sum (40 CFR pt. 63, subp. T)	Recordkeeping: monthly halogenated liquid solvent records	This NESHAP has a limit of 31,085 pounds per year effective May 3, 2010 for the trichloroethylene used in the degreaser.

### **3.3. Periodic Monitoring for Insignificant Activities**

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per United States Environmental Protection Agency (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 Calculation Spreadsheets of this TSD for PTE information for the insignificant activities.

Viking Drill & Tool, Inc. has several operations which are classified as insignificant activities. These are listed in Appendix A: Insignificant Activities and Applicable Requirements to the permit. These activities include the two salt bath lines, natural gas infrared heaters and heating, ventilation and air conditioning units, twelve parts washers, one boiler, welding equipment, and two electrostatic mist cleaners.

**Table 5. Insignificant Activities**

<b>Insignificant Activity</b>	<b>General Applicable Emission limit</b>	<b>Discussion</b>
<p>Fuel use: space heaters fueled by, kerosene, natural gas, or propane.</p> <p><i>Seven natural gas infrared heaters (75,000 Btu each)</i></p>	<p>PM <math>\leq</math> 0.6 or 0.4 lb/MMBtu, Opacity <math>\leq</math> 20% with exceptions (Minn. R. 7011.0515)</p>	<p>For this unit, 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.</p>
<p>Miscellaneous:</p> <p>(3) brazing, soldering, or welding equipment</p> <p><i>Welding area: One arc welder, one plasma cutter, two oxy-acetylene torches used for occasional plant maintenance</i></p>	<p>PM, variable depending on airflow Opacity <math>\leq</math> 20% (Minn. R. 7011.0715)</p>	<p>For these units, based on EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.</p>
<p>Individual emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than:</p> <p>(1) 4,000 lbs/year of carbon monoxide; and</p> <p>(2) 2,000 lbs/year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, volatile organic compounds (including hazardous air pollutant-containing VOC), and ozone.</p>	<p>PM, variable depending on airflow Opacity <math>\leq</math> 20% (with exceptions) (Minn. R. 7011.0715 and Minn. R. 7011.610)</p>	

Insignificant Activity	General Applicable Emission limit	Discussion
<ul style="list-style-type: none"> <li>• <i>Twelve individual parts washers, each of which has a PTE less than 2000 lb/year VOC</i></li> <li>• <i>Rust preventative operation uses less than 2000 lb/year VOC two electrostatic oil mist cleaners</i></li> <li>• <i>One process boiler, 0.6 MMBtu/hr, PTE: 420 lbs/year of CO, 500 lbs/year NO<sub>x</sub>,</i></li> <li>• <i>eleven individual heaters, each of which has PTE less than above thresholds</i></li> <li>• <i>Salt bath</i></li> </ul>		<p>The parts washers and rust preventative operation are very unlikely to have any emissions of particulate matter only VOCs. It is highly unlikely that they could violate the applicable requirement.</p> <p>While no known emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate visible emissions.</p> <p>For the natural gas fired boiler unit, based on the fuels used and EPA published emissions factors, it is highly unlikely that it could violate the applicable requirement.</p> <p>For the eleven individual heaters, based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement.</p> <p>While no known emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate significant particulate matter.</p>
<p>Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities not associated with primary production processes at the stationary source</p>	<p>PM, variable depending on airflow or process weight rate Opacity ≤ 20% (Minn. R. 7011.0715)</p>	<p>While spray equipment will have the potential to emit particulate matter, these particular activities are those not associated with production, so they would be infrequent. Testing or monitoring is not feasible.</p>

Insignificant Activity	General Applicable Emission limit	Discussion
<p>Equipment venting PM/PM<sub>10</sub> inside a building, provided that emissions from the equipment are:</p> <p>a). filtered through an air cleaning system; and</p> <p>b). vented inside of the building 100% of the time</p> <ul style="list-style-type: none"> <li>• <i>Three Torit air filtration systems</i></li> <li>• <i>One Mistbuster air filtration system</i></li> </ul>	<p>PM, variable depending on airflow            Opacity ≤ 20%            (Minn. R. 7011.0715)</p>	<p>While no known emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate significant particulate matter. In addition, some of these units would be operated and vented directly into a building, so testing is not feasible.</p>

### 3.4. Comments Received

Public Notice Period: 3/24/08 - 4/23/08

EPA 45-day Review Period: 3/24/08 - 5/9/08

Comments were not received from the public during the public notice period. There were no changes made to the permit as a result of no comments during this period

Comments were not received from EPA during their review period. There were no changes made to the permit as a result of no comments during this period.

### 4. Conclusion

Based on the information provided by Viking Drill & Tool, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 12300707-003 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:     Jake Swaggert (permit writer)  
   Cary Hernandez (enforcement)  
   Toni Volkmeier (peer reviewer)

AQ File No. 3893; DQ 811

Attachments:    1. Calculation Spreadsheets  
                         2. Facility Description and CD-01 Forms