

**AIR EMISSION PERMIT NO. 13700311-001**

**(AQD File No. 4060MP)**

**FOR**

**OPERATION**

**OF A**

**METALLIC AND NON-METALLIC MINERALS PROCESSING OPERATION**

According to Minnesota Statutes Chapter 115 and 116, Minnesota Rules Chapters 7001 and 7007, and 40 CFR pt. 52, subp. Y:

HOLMES RECYCLING SERVICES, INC.  
3950 Tamminen Road  
Iron, Minnesota 55751

(hereinafter Permittee) is issued an Air Emission Permit by the Minnesota Pollution Control Agency (hereinafter MPCA) for its portable minerals processing operations while located at, and performing work for, any metallic minerals processing plant in the state of Minnesota. The permit authorizes operation of the portable [emission unit\(s\)](#) under the conditions set forth herein.

**Issue Date: August 24, 2001**

**Expiration: August 24, 2006**

Pursuant to Minn. R. 7007.0350, subp. 2, if a stationary source is operating under an Air Emission Permit issued by the MPCA under Minn R. 7001.1200 to 7001.1220, and if the Permittee submitted a complete application for reissuance by the due date established pursuant to Minn. R. 7007.0100 to 7007.1850, the permit shall be considered not to expire until a new permit is issued. All Title I Conditions do not expire.

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Rodney E. Massey, P.E.  
District Director

for Karen A. Studders  
Commissioner  
Minnesota Pollution Control Agency

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## **NOTICE TO THE PERMITTEE:**

In addition to being subject to the MPCA air quality program, your minerals processing stationary source(s) may be subject to the requirements of the 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	(652) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

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

## **PERMIT SHIELD:**

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance. The shield shall only have legal effect if:

1. the specific provision of the applicable requirement is identified in the permit as the basis of permit conditions, or
2. this permit specifically identifies a requirement as not applicable.

The permit shield is not provided to the following applicable requirements:

1. any national ambient air quality standards adopted under section 109, of the Clean Air Act or increment or visibility under part C of title I of the Clean Air Act,
2. any state ambient air quality standard under Minn. R. ch. 7009, or
3. the state noise pollution control rules, Minn. R. ch. 7030.

## TABLE A: LIMITS AND OTHER REQUIREMENTS

This permit applies to the operation of the contractors minerals processing equipment on-site at any of the states taconite processing facilities (metallic minerals processing plants). The Permittee shall abide by the conditions of a non-metallic general permit at all other times when the equipment is operated off-site of a taconite plant.

Table A contains the limits and other requirements with which your metallic and/or non-metallic minerals processing equipment collocated at a stationary source(s) must comply. These 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. The limits and other requirements contained in Table A apply to all the metallic and/or non-metallic minerals processing equipment constructed, modified, or operated by the Permittee but collocated at a stationary source. The Permittee may operate collocated equipment at more than one stationary source, as long as the conditions of this permit are met for each collocated equipment group at each stationary source.

**Stationary Source:** “Stationary source” has the meaning given in Minn. R. 7005.0100, subp. 42c. For the purposes of this permit, a stationary source does not include a “Multiple-Party Site” as defined in 01700043-001, the Permittee’s General Permit for Nonmetallic Mineral Processing. The term is generally meant to apply to the seven taconite processing plants in the state but could apply to other metallic minerals processing operations in the state.

**Collocated at a Stationary Source:** When “collocated” at a stationary source, the Permittee operates the equipment group(s) allowed by this permit on properties controlled by the stationary source, to perform activities for the stationary source, typically under a contractual obligation.

**Equipment Group:** An “equipment group” is the collection of all emission units allowed by this permit for the purposes of metallic or nonmetallic mineral processing. Separate equipment groups for metallic mineral processing and nonmetallic mineral processing may be collocated at each stationary source, as long as the conditions of this permit are met for both metallic and nonmetallic equipment groups.

**Table A.1: Eligibility Requirements**

What to do	Why to do it
<p><b>Emission Units Allowed:</b> All collocated metallic and/or nonmetallic minerals processing equipment constructed, modified and operated under this permit shall consist only of:</p> <ul style="list-style-type: none"> <li>Crushers</li> <li>Screens</li> <li>Wet screening operations and associated transfer operations downstream of the wet screening operation in the production line process up to, but not including, the next crusher in the production line of a nonmetallic mineral processing stationary source. A wet screening operation means a screening facility designed and operated to remove unwanted material from the product by a washing process whereby the product is completely saturated with water in a slurry.</li> <li>Transfer operations (including belt conveyors, enclosed truck/railcar loading stations, bucket elevators, storage bins, stackers, ladders, chutes, classification screws, feeders, pneumatic systems, and bagging operations)</li> <li>Internal combustion engines</li> <li>Storage piles</li> <li>Paved and unpaved roads and parking lots</li> <li>Bulldozers, loaders, and other related vehicles</li> <li>Insignificant activities as defined in Minn. R. 7007.1300, subp. 2 and 3</li> </ul>	<p>Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2</p>
<p><b>Emission Units Not Allowed:</b> Although only the emission units listed in “Emission Units Allowed” are allowed under this permit, the following emission units that are sometimes part of a metallic or nonmetallic minerals processing stationary source are specifically not allowed under this permit: grinding mills, air conveying systems, air separators, air classifiers, calciners, and aggregate heaters/dryers.</p>	<p>Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2</p>
<p><b>Other NSPS Affected Facilities Not Allowed:</b> Collocated metallic and/or nonmetallic minerals processing equipment constructed, modified, and operated under this permit shall not contain equipment which is an affected facility under any New Source Performance Standard (NSPS) under 40 CFR pt. 60, other than 40 CFR pt. 60, subp. LL or subp. OOO. (This excludes tanks (must be insignificant activities) subject to a recordkeeping requirement under 40 CFR pt. 60, subp. Kb).</p>	<p>Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2</p>

**Table A.1 (Continued)**

<p><b>Materials Allowed:</b> Except as specifically provided below, collocated metallic and/or nonmetallic mineral processing equipment groups constructed, modified, and operated under this permit may produce or process only:</p> <ul style="list-style-type: none"><li>Crushed and broken limestone</li><li>Crushed and broken granite</li><li>Crushed and broken stone</li><li>Crushed and broken metallic ore</li><li>Taconite pellets, chips, and sinter</li><li>Taconite concentrate and other materials 3/16 inch in diameter and smaller</li><li>Construction sand and gravel</li><li>Recycled concrete</li><li>Recycled asphalt pavement</li><li>The initial steps in producing manufactured sand</li></ul> <p>Exceptions:</p> <p>Other - De Minimis Quantities: A de minimis quantity is a quantity of materials, other than those listed above, that may be produced or processed such that the total amount of actual emissions from producing or processing of all de minimis quantities in any calendar year while collocated at any stationary source location is less than one ton (i.e., 1 ton/year per site) of Particulate Matter (PM). No pollutants other than PM and Particulate Matter less than 10 microns (PM<sub>10</sub>) may be emitted as a result of producing or processing the other material, except those emitted from the operation of associated internal combustion engines. Whenever the Permittee produces or processes de minimis quantities of other materials, calculations of the projected and actual PM and PM<sub>10</sub> emissions from producing or processing de minimis quantities must be kept by the Permittee along with records of the dates, site, tons of material produced or processed and a description of the material. These emissions need to be accounted for in the 12-month rolling sum emission caps.</p>	<p>Minn. Stat. § 116.07, subd. 4a and Minn. R. 7007.0800, subp. 2</p>
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**Table A.1 (Continued)**

<p><b>Control Equipment Allowed:</b> Collocated metallic and/or nonmetallic minerals processing equipment groups constructed, modified, and operated under this permit may contain add-on air pollution control equipment to capture and remove air pollutants from process air streams or have equipment located indoors provided that compliance with all emission limits in this permit are maintained without considering the effect of such controls. Because no prescribed operation and maintenance and recordkeeping is required, reduced emissions due to such add-on control equipment will not be considered when calculating emissions for the annual emissions inventory.</p>	<p>Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2</p>
<p><b>Geographic Areas of Operation Allowed:</b> Under this permit, provided all conditions are met when collocated at each stationary source, the Permittee is authorized to construct, modify and operate equipment groups collocated at multiple stationary sources simultaneously anywhere in Minnesota except any area designated as nonattainment for PM<sub>10</sub>. If the Permittee wishes to operate at a stationary source in an area that is or becomes reclassified nonattainment for PM<sub>10</sub> after issuance of this permit, the Permittee must submit an application for an individual part 70, state, or registration permit to cover their operations at the stationary source before commencing operation or beginning actual construction or modification of metallic or nonmetallic minerals processing equipment.</p>	



**Table A.2: Overall Requirements that Apply to the Permittee**

What to do	Why to do it
<b>Recordkeeping:</b> Retain all records required by this permit at each equipment group or, at the Permittee's option, the Permittee's central office for a period of five years from the date of monitoring, emission calculations, sampling, measurement, or report. Records which must be retained include all calibration and maintenance records, all original chart recordings for continuous monitoring instrumentation, and copies of all reports and records required by this permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(A) and 5(C)
<b>Submittals:</b> All submittals required by this permit must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Submittals which must be provided on forms approved by the Commissioner are noted in Tables A and B. All submittals must be postmarked or received by the date specified in the tables.	Minn. R. 7007.0800, subp. 6
<b>Submittal Extension Requests.</b> Any extension requests for submittal dates must be postmarked or received at least 21 days prior to the deadline(s) specified in this general permit. The request must explain the reason(s) why the extension is needed, with a separate explanation for each deadline for which an extension is sought. A requested extension will not be effective until approved by the Air Quality Division (AQD) Manager. The AQD Manager will grant an extension only for such period of time as the AQD Manager determines is reasonable under the circumstances.	Minn. R. 7007.0800 subp. 16(L)
<b>Oral Notification of Deviations Endangering Human Health and the Environment:</b> Within 24 hours of discovery, orally notify the Commissioner of any deviation from the general permit conditions which could endanger human health or the environment. The telephone number is (612)296-7300.	Minn. R. 7007.0800, subp. 6(A)
<b>Written Notification of Deviations Endangering Human Health and the Environment:</b> Due two working days after the discovery of the deviation, submit a written description of the deviation to the Supervisor, Compliance Determination Unit, Air Quality Division, Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194, including the following information: cause of the deviation; exact dates of the period of the deviation; if the deviation has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7007.0800, subp. 6(A)

**Table A.2 (Continued)**

<b>Shutdowns:</b> Notify the Commissioner, by calling (612)296-7300, at least 24 hours in advance of shutdown of any process or control equipment if the shutdown would cause an increase in the emission of air contaminants. At the time of notification, notify the Commissioner of the cause of the shutdown and the estimated duration. Notify the Commissioner again when the shutdown is over.	Minn. R. 7019.1000, subp. 1
<b>Breakdowns:</b> Notify the Commissioner, by calling (612)296-7300, immediately of a breakdown of more than one hour duration of any process or control equipment if the breakdown causes an increase in the emission of air contaminants. At the time of notification or as soon thereafter as possible, the Permittee shall also notify the Commissioner of the cause of the breakdown and the estimated duration. Notify the Commissioner again when the breakdown is over.	Minn. R. 7019.1000, subp. 2
<b>Semiannual Deviations Reports:</b> A mid-year report, covering deviations which occurred during the period from January 1, through June 30, is due by July 30, of each year. An end-of-year report, covering deviations which occurred during the period from July 1, through December 31, is due by January 30, of each year. <i>The reports must be submitted even if there were no deviations for the reporting period.</i> This is to be submitted on a form approved by the Commissioner.	Minn. R. 7007.0800, subp. 6(A)
<b>Compliance Certification:</b> Due 30 days after the end of each calendar year (January 30) following general permit issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner.	Minn. R. 7007.0800, subp. 6(C)
<b>Emissions Inventory Report:</b> To be submitted annually on a form approved by the Commissioner which will be sent to you each year.	Minn. R. 7019.3000- 7019.3010
<b>Emission Fees:</b> Due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005- 7002.0095
<b>Inspections:</b> Upon presentation of credentials allow the MPCA, or its representative, to enter the Permittee's premises, to have access to and copy any records required by this general permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
<b>Circumvention:</b> The Permittee is prohibited from installing or using 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
<b>Performance Testing:</b> Conduct all performance testing in accordance with Minn. R. ch. 7017, unless otherwise noted. The Commissioner may request additional performance testing under Minn. R. 7017.2020, subp. 1.	Minn. R. 7017.2001- 7017.2060

**Table A.3: Requirements and Limits that Apply to the Entire Stationary Source**

What to do	Why to do it
<p><b>Material Moisture Content:</b></p> <p>At each equipment group, the feed material moisture content shall be greater than or equal to 1.5 percent. This shall be demonstrated at each equipment group by either one or two below:</p> <ol style="list-style-type: none"> <li>1. Test moisture content of each different feed material source (sampled at an area representative of the feed source and physically capable of being sampled), as follows: <ol style="list-style-type: none"> <li>a. Use American Society for Testing and Materials (ASTM) method numbers D 2216-92 or D 4643-93, (or equivalent).</li> <li>b. Keep records of each moisture content test summarizing the method used, results, date, time, and initials of person performing test.</li> <li>c. Test weekly, when operating, unless three consecutive tests at the stationary source location show moisture contents of greater than or equal to 1.5 percent after which testing is no longer required until the source of the feed material changes.</li> <li>d. When testing indicates that feed material moisture content is less than 1.5 percent, or in situations where it is infeasible to sample and test, or where the Permittee elects not to sample and test, the Permittee must operate a moisture addition device at or immediately prior to the initial crusher(s) or initial screen(s) where unprocessed feed material is being fed to achieve a moisture content greater than or equal to 1.5 percent. Moisture addition during operation shall continue until subsequent moisture content testing demonstrates that feed material moisture content is greater than or equal to 1.5 percent. Daily, when operating, either: (i) keep records of the date, water flow rate, material throughput rate, and initials of the person making the record and the time the record was made; or (ii) conduct moisture content testing daily on the feed material after water application following a. and b. above, and if results show moisture content is less than 1.5 percent, increase water addition to insure moisture is 1.5 percent or greater and re-test to verify.</li> </ol> </li> </ol>	<p>Title I Condition. Limit to avoid classification as major source and modification under 40 CFR § 52.21 and Minn. R. 7007.3000; Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2</p>

**Table A.3 (Continued)**

<p><b><u>OR</u></b></p> <p>2. Keep records indicating that feed material is being removed from below the water table - or from below the surface of a waterway (e.g., creek, river, lake) - or that the feed material is recycled asphalt pavement. Records shall include a description of the source (if recycled asphalt pavement, so indicate), the corresponding dates, and the initials of the person making the record.</p> <p><b>Stationary Source Designation and Capacity Limits:</b></p> <p>Each metallic minerals processing facility in the state is considered a separate stationary source. Each of these stationary sources (i.e. mainly taconite plants) is considered a major source under the federal Prevention of Significant Deterioration (PSD) permitting program. Thus any modification to the stationary source that exceeds the major modification thresholds of 15 tons per year of PM<sub>10</sub> and 25 tons per year of total suspended particulate (TSP) would require PSD permitting. The Permittee has agreed to avoid PSD permitting by accepting limits to keep emissions below the PSD major modification thresholds (see Table A.4). These emission limits apply separately to each equipment group collocated at a stationary source (minerals processing plant, mainly taconite plants). Therefore the limits apply separately for metallic minerals processing and non-metallic minerals processing equipment groups at each stationary source.</p> <p><b>Recordkeeping Requirements for each Metallic and each Non-metallic Equipment Group:</b></p> <p>For non-metallic minerals processing and metallic minerals processing equipment groups the Permittee shall daily record the production, in tons, for each equipment group, and for each allowed operation within the equipment group. The Permittee shall total the monthly production for each operation and calculate and record the monthly emissions of total suspended particulate emissions and particulate matter less than 10 microns in diameter (PM<sub>10</sub>) from each; metallic and non-metallic equipment group.</p> <p>The Permittee shall also daily record the type and quantity of fuel consumed by the electrical generating internal combustion engines used with a given equipment group, and calculate and record the monthly emissions of total suspended particulate, PM<sub>10</sub>, Sulfur Dioxide (SO<sub>2</sub>), Nitrogen Oxides(NO<sub>x</sub>), carbon monoxide (CO), and Volatile Organic Compounds (VOC) from all fuel combusted.</p> <p>The Permittee shall total all monthly emissions from all sources within a given equipment group and calculate a 12 month rolling sum (i.e., the current month plus the eleven preceding months) of emissions for each pollutant. All calculations must be completed and recorded by the 15th day of the following month.</p> <p>If an equipment group has less than 12 months of operational data, the Permittee shall determine limits during the first 12 months under this permit using the following formula:</p>	<p>Title I Condition. Limit to avoid classification as major source and modification under 40 CFR § 52.21 and Minn. R. 7007.3000; Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2</p>
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**Table A.3 (Continued)**

<p> <math display="block">N = 0.95 \times (\text{Annual Emission Limit}) + 0.0045 \times (\text{Annual Emission Limit}) \times (n-1)</math>           Where "n" is the number of months in operation, and "N" is the rolling sum limit for the current month.         </p> <p>At its option, the Permittee may calculate and record individual monthly sums, in lieu of 12-month rolling sums, for a stationary source location such that the annual production limit divided by 12 is not exceeded. These calculations and records must be made by the 15th of the following month.</p> <p>The following equation and list of emission factors shall be used to calculate the tons of PM and PM<sub>10</sub> emissions each month from the processing of non-metallic/metallic minerals.</p> <p>Production rate (tons per month) X Emission Factor (see list below) / 2000 = Tons of Pollutant Emitted Per Month</p> <p>The production rate can be for crushing, screening, transferring, or storage of non-metallic minerals or for the crushing, screening, transferring, or storage of metallic minerals. The production rate for unpaved roads shall be the total of all materials brought to any operation of an equipment group by a motorized vehicle.</p> <p>The following emission factors shall be used in the equation above (other emission factors shall be used only upon approval from the Agency):</p> <p><u>Non-metallic operations</u></p> <table> <tr> <th><u>PM</u></th><th><u>PM<sub>10</sub></u></th></tr> <tr> <td>Crushing - 0.0016 lb/ton</td><td>0.00059 lb/ton</td></tr> <tr> <td>Fines Screening - 0.0036 lb/ton</td><td>0.0021 lb/ton</td></tr> <tr> <td>Screening - 0.0084 lb/ton</td><td>0.00084 lb/ton</td></tr> <tr> <td>Transfer Operations - 0.00014 lb/ton</td><td>0.000048 lb/ton</td></tr> <tr> <td>Unpaved Roads - 0.0109 lb/ton</td><td>0.00491 lb/ton</td></tr> <tr> <td>Piles - 0.00872 lb/ton</td><td>0.00412 lb/ton</td></tr> </table> <p><u>Metallic operations</u></p> <table> <tr> <th><u>PM</u></th><th><u>PM<sub>10</sub></u></th></tr> <tr> <td>Crushing - 0.0016 lb/ton</td><td>0.00059 lb/ton</td></tr> <tr> <td>Fines Screening - 0.0036 lb/ton</td><td>0.0021 lb/ton</td></tr> <tr> <td>Screening - 0.0084 lb/ton</td><td>0.00084 lb/ton</td></tr> <tr> <td>Transfer Operations - 0.00014 lb/ton</td><td>0.000048 lb/ton</td></tr> <tr> <td>Unpaved Roads - 0.0263 lb/ton</td><td>0.0118 lb/ton</td></tr> <tr> <td>Piles - 0.00125 lb/ton</td><td>0.00059 lb/ton</td></tr> </table> <p>The following equation shall be used to calculate the tons of PM, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, and VOC emissions each month from the combustion of fuels in the electrical generating equipment and other non-mobile internal combustion engines. The appropriate emission factors to be used are attached to this permit.</p> <p>Fuel Consumption Rate (volume per month) X Emission Factor (see list attached to permit) / 2000 = Tons of Pollutant Emitted Per Month</p> <p><b>Non-Process Dust Control Options:</b></p> <p>The following non-process dust control requirements shall apply to the equipment groups collocated at each stationary source covered by this permit .</p> <p>The Permittee shall comply with the requirements of Minn. R. 7011.0150. This means that all reasonable measures shall be taken to prevent avoidable amounts of</p>	<u>PM</u>	<u>PM<sub>10</sub></u>	Crushing - 0.0016 lb/ton	0.00059 lb/ton	Fines Screening - 0.0036 lb/ton	0.0021 lb/ton	Screening - 0.0084 lb/ton	0.00084 lb/ton	Transfer Operations - 0.00014 lb/ton	0.000048 lb/ton	Unpaved Roads - 0.0109 lb/ton	0.00491 lb/ton	Piles - 0.00872 lb/ton	0.00412 lb/ton	<u>PM</u>	<u>PM<sub>10</sub></u>	Crushing - 0.0016 lb/ton	0.00059 lb/ton	Fines Screening - 0.0036 lb/ton	0.0021 lb/ton	Screening - 0.0084 lb/ton	0.00084 lb/ton	Transfer Operations - 0.00014 lb/ton	0.000048 lb/ton	Unpaved Roads - 0.0263 lb/ton	0.0118 lb/ton	Piles - 0.00125 lb/ton	0.00059 lb/ton	<p>Title I Condition. Limit to avoid classification as major modification under 40 CFR § 52.21 and Minn. R. 7007.3000;; Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2</p>
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particulate matter from becoming airborne. Control of non-process dust emissions can be achieved through such measures as applying water or commercially available dust suppressant to stock piles, unpaved roads and handling areas.

In addition, the following requirements apply to the Permittee:

1. Record date and time of action and initials of person making the record.
2. Record amount of water or dust suppressant applied.
3. If a commercially available dust suppressant is used, it shall be applied in accordance with the manufacturer's guidelines. A copy of these manufacturer's guidelines must be kept by the Permittee.

**Table A.3 (Continued)**

<p><b>Labeling Requirements:</b> Permanently affix the manufacturer's serial number (or otherwise unique identifying number) to each piece of crushing, screening, transfer operation, and stationary internal combustion engine equipment for tracking purposes prior to collocation at a stationary source. The number shall be permanently affixed and maintained so that it is readable and visible at all times from a safe distance at each equipment group. This number shall correspond to the number contained in records regarding the piece of equipment.</p>	<p>Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2</p>
<p><b>NSPS Equipment Description and Notification:</b> When additional equipment is added to the Permittee's collocated operations, an NSPS Equipment Description and Notification must be submitted on a form approved by the Commissioner and/or a record must be made as described below. The NSPS Equipment Description and Notification form shall be used to provide the required NSPS notifications described in Table A.7 and summarized in Table B. All NSPS affected facilities owned or operated by the Permittee and collocated at any stationary source covered by this permit must be accounted for in the NSPS Equipment Description and Notification form submitted at the time of permit application or in these subsequent updates. If a piece of equipment is not subject to NSPS, the Permittee must keep records to demonstrate that it did not need to be included in a notification. (You are not required to repeat the notices and tests if they have already been done (separate testing is required for showing compliance with subpart OOO (non-metallic minerals processing) and subpart LL (metallic minerals processing)); however, you must be able to indicate where the documentation of the notices and tests can be found (e.g., the AQD file).)</p>	<p>Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2</p>
<p><b>New Location Notification:</b> Submit a New Location Notification on a form approved by the Commissioner, at least 48 hours prior to each establishment or removal of an equipment group at a stationary source.</p>	<p>Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2, Minn. R. 7007.0800, subp. 12</p>

**Table A.4: Limits Set to Keep Contract Work at Each Taconite Plant Site a Non-Major Modification for PSD**

What to do	Why to do it
<b>PM Emissions for each Equipment Group:</b> less than or equal to 24 tons per year, calculated as a 12-month rolling sum	Title I Condition: Limit taken to remain a non-major modification under 40 CFR § 52.21
<b>PM-10 Emissions for each Equipment Group:</b> less than or equal to 14 tons per year, calculated as a 12-month rolling sum	Title I Condition: Limit taken to remain a non-major modification under 40 CFR § 52.21
<b>SO2 Emissions for each Equipment Group:</b> less than or equal to 39 tons per year, calculated as a 12-month rolling sum	Title I Condition: Limit taken to remain a non-major modification under 40 CFR § 52.21
<b>NOx Emissions for each Equipment Group:</b> less than or equal to 38 tons per year, calculated as a 12-month rolling sum	Title I Condition: Limit taken to remain a non-major modification under 40 CFR § 52.21
<b>CO Emissions for each Equipment Group:</b> less than or equal to 99 tons per year, calculated as a 12-month rolling sum	Title I Condition: Limit taken to remain a non-major modification under 40 CFR § 52.21
<b>VOC Emissions for each Equipment Group:</b> less than or equal to 39 tons per year, calculated as a 12-month rolling sum	Title I Condition: Limit taken to remain a non-major modification under 40 CFR § 52.21



**Table A.5: Limits that Apply to NSPS Crushers**

(Those subject to 40 CFR pt. 60, subp. LL and subp. OOO)

What to do	Why to do it
<b>Opacity:</b> less than 10 percent opacity.	40 CFR § 60.382(b) and Minn. R. 7011.2700
<b>Opacity:</b> less than 15 percent opacity.	40 CFR § 60.672(c) and Minn. R. 7011.3350

**Table A.6: Limits that Apply to other Equipment Subject to NSPS**

(Those subject to 40 CFR pt. 60, subp. LL and subp. OOO. Included here are, screens, belt conveyors, bucket elevators, bagging operations, storage bins, and enclosed truck or railcar loading stations.)

What to do	Why to do it
<b>Opacity:</b> less than 10 percent opacity.	40 CFR § 60.382(b) and Minn. R. 7011.2700
<b>Opacity:</b> less than 10 percent opacity.	40 CFR § 60.672(b) and Minn. R. 7011.3350

**Table A.7: Limits that Apply to Equipment not Subject to NSPS**

What to do	Why to do it
<b>Opacity:</b> For equipment put in operation on or after July 9, 1969: less than 20 percent opacity. For equipment put in operation before July 9, 1969: less than 20 percent opacity except that a maximum of 60 percent opacity shall be permissible for four minutes in any 60-minute period and 40 percent opacity shall be permissible for four additional minutes in any 60-minute period or as required by Minn. R. 7011.0710, subp. 1(B) as amended after permit issuance.	Minn. R. 7011.0715, subp. 1(B) Minn. R. 7011.0710, subp. 1(B)

**Table A.8: NSPS Notification and Testing Requirements for Equipment Newly Subject to NSPS (Subpart LL and Subpart OOO) and Submittal Requirements for Replacements**

(You are not required to repeat the notices and tests if they have already been done for a given subpart (separate notices and testing are required for subpart OOO (non-metallic minerals processing) and subpart LL (metallic minerals processing)); however, you must be able to indicate where the documentation of the notices and tests can be found (e.g., the AQD file .)

What to do	Why to do it
<b>CONSTRUCTION OR RECONSTRUCTION:</b> Notification of construction or reconstruction postmarked no later than 30 days after the start of construction as defined in 40 CFR § 60.2, except for mass-produced (prefabricated) affected facilities.	40 CFR § 60.7(a)(1) and Minn. R. 7019.0100
<b>ANTICIPATED INITIAL STARTUP:</b> Notification of the anticipated initial startup date postmarked no more than 60 days nor less than 30 days prior to such date. Startup is defined in 40 CFR § 60.2.	40 CFR § 60.7(a)(2) and Minn. R. 7019.0100
<b>ACTUAL INITIAL STARTUP:</b> Notification of actual initial startup date postmarked within 15 days after such date.	40 CFR § 60.7(a)(3) and Minn. R. 7019.0100
<b>INITIAL PERFORMANCE TESTING:</b> Shall be completed within 60 days of obtaining maximum capacity but no later than 180 days after initial startup date.	40 CFR § 60.8(a), 60.385, 60.386, 60.675, 60.676, Minn. R. 7017.2015, and Minn. R. 7011.3350
<b>PERFORMANCE TEST NOTIFICATION</b> Performance test notification postmarked at least 30 days prior to conducting a performance test.	40 CFR § 60.8(d), and Minn. R. 7017.2015 and Minn. R. 7017.2030, subp. 1
<b>REPLACEMENT:</b> Notification postmarked within 60 days after making the replacement of an existing facility as allowed by NSPS, subp. OOO.	40 CFR §§ 60.670(d), 60.676, and Minn. R. 7011.3350

**Table A.9: Requirements and Limits that Apply to Stationary Internal Combustion Engines at all Collocated Equipment at Each Stationary Source**

(This includes electric generators as well as other stationary internal combustion engines (e.g., those which directly drive crushers or screens), but does not include mobile sources, such as loaders, haul trucks and other vehicles.)

What to do	Why to do it
<b>Allowed Fuels:</b> Diesel fuel, natural gas, liquefied petroleum gas (LPG)/propane, and gasoline. No other fuels shall be used.	Limit to ensure compliance with Minn. R. 7011.2300, subp. 2; Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2
<b>Opacity:</b> not to exceed 20 percent opacity for more than ten consecutive seconds once operating temperatures have been obtained.	Minn. R. 7011.2300, subp. 1

**Table A.10: Limits and Requirements that Apply to Volatile Organic Liquid Storage Tanks (Must be Insignificant Activities) Which are Subject to 40 CFR pt. 60, subp. Kb**

Tanks *subject* to 40 CFR pt. 60, subp. Kb, include those meeting both of the following requirements:

- storage capacity is greater than or equal to 40 m<sup>3</sup> (10,568 gallons); **and**
- tank construction, reconstruction, or modification commenced after July 23, 1984.

What to do	Why to do it
<b>Tank size:</b> Any volatile organic liquid storage tank constructed, reconstructed, or modified after July 23, 1984, must have a design capacity less than 75 m <sup>3</sup> (19,815 gallons)	Minn. Stat. § 116.07, subd. 4a, Minn. R. 7007.0800, subp. 2, and Minn. R. 7007.1100
<b>Records:</b> For each tank, keep records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Retain records for the life of the tank.	40 CFR §§ 60.116b(b) and 60.116b(a), and Minn. R. 7011.1520(C)

## TABLE B: SUBMITTALS

Table B lists the submittals you must send to the Commissioner. Send all submittals (unless specifically instructed otherwise) to: Supervisor, Compliance Determination Unit, Air Quality Division, Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

When to send	What to send	What is affected
At least 48 hours prior to each establishment or removal of an equipment group collocated at a stationary source	<b>New Location Notification</b> on a form approved by the Commissioner	Each equipment group collocated at a stationary source, as covered by this permit
No later than 30 days after such date	<b>NSPS Equipment Description and Notification</b> on a form approved by the Commissioner Notifying commencement of construction (defined in 40 CFR § 60.2)	Equipment newly subject to NSPS subp. LL or subp. OOO except for mass-produced (i.e., prefabricated) facilities
No more than 60 days nor less than 30 days prior to such date	<b>NSPS Equipment Description and Notification</b> on a form approved by the Commissioner Notifying anticipated date of initial startup	Equipment newly subject to NSPS subp. LL or subp. OOO
Within 15 days after such date	<b>NSPS Equipment Description and Notification</b> on a form approved by the Commissioner Notifying initial startup date	Equipment newly subject to NSPS subp. LL or subp. OOO
Within 60 days after making the replacement	<b>NSPS subp. OOO Equipment Description and Notification</b> on a form approved by the Commissioner Notifying equipment replacement (With information required in 40 CFR § 60.676 attached)	An existing facility (piece of equipment not subject to NSPS subp. OOO) being replaced by a piece of equipment of equal or smaller size or capacity

**Table B (Continued)**

At least 30 days before performance test date	<b>Test Plan</b> on a form approved by the Commissioner along with  <b>NSPS Equipment Description and Notification</b> on a form approved by the Commissioner Notifying performance test	Affected facility as defined in 40 CFR § 60.385 and 60.676, and any other equipment required to be tested including metallic minerals processing equipment
At least 7 days before performance test date	<b>Pre-test meeting</b>	Affected facility as defined in 40 CFR § 60.385 and 60.676, and any other equipment required to be tested
Within 45 days after performance test date	<b>Test report</b>	Equipment tested
Within 105 days after performance test date	<b>Microfiche test report</b>	Equipment tested
Semiannually: July 30, covering January 1 through June 30, and January 30, covering July 1 through December 31.	<b>Semiannual Deviations Reporting</b> on a form approved by the Commissioner with a summary of <i>all</i> instances of deviations from permit conditions (or indicating none occurred). Submit the end-of-year report with your annual Compliance Certification	All equipment collocated at all stationary sources covered by this permit  (A single form indicating information for equipment covered by this permit during the reporting period)
Annually, by January 30 for the previous calendar year	<b>Compliance Certification</b> on a form approved by the Commissioner	All equipment collocated at all stationary sources covered by this permit  (A single form indicating information for equipment covered by this permit during the reporting period)

**Table B (Continued)**

Annually, by April 1, for the previous calendar year. The Permittee is responsible for reporting all emissions they generated from the processing of both metallic and non-metallic minerals at each taconite plant site.	<b>Emissions inventory report</b> A form will be sent for you to complete and return. The emissions generated under this permit shall be summed with the emissions generated under the general permit and the total emissions shall be reported.	All equipment collocated at all stationary sources as covered by this permit  (A single form indicating information for equipment covered by this permit during the reporting period)
Annually, within 60 days of receipt of an MPCA bill	<b>Emission fees</b>	All equipment collocated at each stationary source as covered by this permit (A single payment for equipment covered by this permit during the period)
Within 24 hours of discovery	<b>Oral notification of deviation endangering human health or the environment</b> By calling (612)296-7300	All equipment collocated at each stationary source as covered by this permit
Within 2 days of discovery	<b>Written description of deviation endangering human health or the environment</b>	All equipment collocated at each stationary source as covered by this permit
At least 24 hours before a shutdown of process or control equipment if it would cause an increase in the emission of air contaminants and again when the shutdown is over	<b>Shutdown notification</b> By calling (612)296-7300	All equipment collocated at each stationary source as covered by this permit
Immediately for a breakdown of more than one hour duration of any process or control equipment if the breakdown causes an increase in the emission of air contaminants and again when the breakdown is over	<b>Breakdown notification</b> By calling (612)296-7300	All equipment collocated at each stationary source as covered by this permit
At least 21 days prior to the deadline for which an extension is being requested	<b>Submittal extension request</b>	Varies

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 13700311-001**

This Technical Support Document (TSD) is for all the interested parties of the permit. The purpose of this document is to set forth the legal and factual basis for the permit conditions, including references to the applicable statutory or regulatory provisions.

**1. General Information**

1.1. Applicant and Stationary Source Location:

Owner and Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 1442 & 1011)
Holmes Recycling Services, Inc.	Portable
3950 Tamminen Road	
Iron, Minnesota 55751	

1.2. Description of the facility

Holmes Recycling Services, Inc. operates a screening operation (SIC Code 1442). All of the equipment used in the operation is portable and consists of screens, materials transfer equipment (i.e. belt conveyors), and diesel engines to power the equipment. The equipment can be used all over the state to produce materials for the construction industry. Some of the contract work Holmes Recycling performs is on the site of the existing seven taconite plants in the state. This work can consist of the processing of either metallic minerals or non-metallic minerals.

The majority of the emissions associated with the processing of these materials are fugitive particulate emissions. The other pollutants of concern are from the combustion of diesel fuel used in the portable electrical generators. In terms of pollution control equipment the only such devices are water sprays.

1.3 Description of any changes allowed with this permit issuance

Holmes Recycling likely needs a non-metallic minerals processing general permit to operate off taconite plant property. The Agency has determined that that permit does not allow operation of their equipment on the property of the seven taconite plants in the state. The taconite plants are all major air emission sources according to the Prevention of Significant Deterioration (PSD) permitting program (40 CFR § 52.21). Thus any modification to a taconite plant that increases emissions over the major modification thresholds, requires a major permit amendment. Operation of Holmes Recycling equipment at a taconite plant beyond these emission thresholds would require PSD permitting prior to operation.



Holmes Recycling has decided to avoid PSD permitting by accepting annual production limitations for both metallic and non-metallic minerals at each taconite plant site.

Compliance with the major modification emission caps is going to be shown by calculating emissions on a monthly basis for each equipment group according to the production and operation for the month.. Equipment group is defined on page five of this permit. Thus 12-month rolling sum emission estimates shall be performed for both the emissions from the minerals processing and the combustion emissions from fuel burning. These 12-month rolling sum values shall remain below the annual emission caps listed in Table A.4 of the permit. Table A.4 lists annual criteria pollutant emissions at one ton per year below the major modification threshold to allow for a cushion to maintain compliance with the actual threshold values. **This calculation includes all emission units in each group.** As with the non-metallic general permit, mobile source (front end loader) emissions are not included in this permit. **An extra cushion was placed on the NO<sub>x</sub> limitation in the permit to account for these extra diesel combustion emissions. The NO<sub>x</sub> limit was set at 38 tons per year instead of 39. This limit was set to account for the approximately 2 tons of NO<sub>x</sub> generated from front end loaders operating about 20 weeks a year per site consuming 400 gallons of diesel per week.**

For emissions inventory reporting purposes, all emissions generated by the Permittee while located at a taconite plant site are the responsibility of the Permittee and shall be accounted for in the annual report.

**Derivation of Emission Factors Used in Permit**  
(as per Pam Johnson from Braun Intertec Email)

The basis for all of these is the (TSD) for the nonmetallic mineral processing general permit (attached to this TSD).

For METALLIC PROCESSING:

Unpaved Roads

$$E \text{ [lb/VMT]} = k(5.9)(s/12)(S/30)(W/3)^{0.7}(w/4)^{0.5}((365-p)/365)$$

All parameters the same as in the TSD, except the silt content I used was 5.8 percent because it reflects the metallics ore silt content more accurately (see AP-42 chapter 11). I assumed the taconite companies were using the maximum control on their haul roads of 75 percent.

Therefore,  $(0.0218/4.8)5.8 = 0.0263 \text{ lb PM/ton}$ .

For PM<sub>10</sub> I used the particle size multiplier of 0.36 instead of the multiplier of 0.8 that is used for PM.

Piles

$$E \text{ [lb/ton]} = k(0.0032)[((U/5)^{1.3})/((M/2)^{1.4})]$$

All parameters the same as in the TSD, except the moisture content I used was 6 percent (which reflects the material stored better).

Therefore, E = 0.00125 lb PM/ton.

For PM<sub>10</sub> I used the particle size multiplier of 0.35 instead of the multiplier of 0.74 that is used for PM.

#### NONMETALLIC PROCESSING:

I used the same Unpaved Roads equation as in the TSD, however I used 0.25 = VMT/load instead of 0.5 because the product is shipped out by railcars, not trucks on unpaved roads (consequently one-half of the normal loaded vehicle travel does not happen.)

Piles

I did not make any changes from the TSD.

#### 1.4 Description of permits issued

Permit Number and Issuance Date	Action Authorized
<i>None at this point</i>	Non-metallic minerals processing general permit for operation throughout the state processing strictly non-metallic minerals. <i>Not obtained yet.</i>

#### 1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:

	PM tpy	PM10 tpy	SO2 tpy	NOx tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions*	24	14	39	39	99	39	-----	-----	-----
Total Facility Actual Emissions*	-----	-----	-----	-----	-----	-----	-----	-----	-----

\*These are the limited potential emissions. They differ from those in the permit application sent by the company in that they have been verified and corrected as needed by MPCA staff. These are the potential emissions that would appear in a public notice.

Table 2. Facility (TF) and Permit Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD (list pollutant)		PM, PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO	
NAAR (list pollutant) <b>Not Applicable</b>			
Part 70 Permit Program (list pollutant)	-----	-----	-----

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

## 2. Regulatory and/or Statutory Basis

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

### Regulatory Overview of Facility

Applicable Regulations	*Comments:
40 CFR § 60 Subp. OOO	Standards of Performance for Non-Metallic Minerals Processing Plants
40 CFR § 60 Subp. LL	Standards of Performance for Metallic Minerals Processing Plants
40 CFR § 60 Subp. A	General Provisions (for NSPS sources)
40 CFR § 52.21	Prevention of Significant Deterioration. Limits set to keep modification non-major
Minn. R. 7011.0700 - Minn. R. 7011.0715	Industrial Process Equipment Rule

\* Comments column is for name of the regulation, citations that need further explanation, and to include essential data used to determine the applicability of that particular regulations, standard or permit condition.. Most rows should not have any further explanation needed and will contain only the name of the regulation.

## 3. Technical Information

The following additional information is attached to this technical support document.

- The section of AP-42 that all the factors in the permit come from (fifth edition chapter 11.19.2).
- The technical support document for the non-metallic general permit
- A calculation sheet regarding mobile diesel combustion emissions.

## 4. Conclusion

Based on the information provided by Holmes Recycling, Inc., the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13700311-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Brett Ballavance, Kris Coe, Bob Beresford

Attachment: CD-01 Forms  
Others specified in section 3