

**AIR EMISSION PERMIT NO. 01500007- 004
(PART 70 REISSUANCE PERMIT)**

IS ISSUED TO

Acme-Ochs Plant

ACME BRICK COMPANY

801 Rock Street East
Springfield, Brown County, MN 56087

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

Permit Application Type	Action No.	Application Date(s)	Issuance Date (s)
Total Facility Operating Permit-Reissuance Supplement to Operating Permit-Reissuance Administrative Permit Amendment	004	March 4, 2005 May 6, 2008 March 20, 2008	See Below

This permit supersedes Air Emission Permit Nos. 01500007-001 through 003 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/Limits to Avoid New Source Review

Issue Date: July 18, 2008

Expiration: July 18, 2013
All Title I Conditions do not expire.

Jeff J. Smith, Manager
Air Quality Permits Section
Industrial Division

for Brad Moore
Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

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

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

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

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

PERMIT SHIELD:

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

Acme-Ochs Brick Plant (formerly Ochs Brick Company) manufactures bricks from clay. Clay is mined off site. As it is used, it is milled and screened to create a consistent material. Water is added as necessary to create the correct consistency for extruding and forming the brick. As the brick material is extruded, the bricks are chopped to the correct size. Bricks are then stacked and proceed through a heating and drying chamber prior to the firing kiln. Fired bricks are then packaged for storage and shipment.

The primary source of air pollution is the firing kiln. Emissions are combustion products of natural gas or distillate oil, and gaseous emissions driven off as the clay is fired (sulfur dioxide, hydrogen fluoride, and hydrogen chloride). The facility has accepted limits on the annual quantity of bricks produced, the sulfur content of the clay used, and the sulfur content of the distillate oil combusted, to maintain the potential emissions of sulfur dioxide below 250 tons per year.

This permit action is a Part 70 permit reissuance.

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Acme-Ochs Plant
 Permit Number: 01500007 - 004

Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item: Total Facility

What to do	Why to do it
PRIMARY OPERATING LIMITS	hdr
<p>Sulfur Content for Each Clay Type: less than or equal to 0.083 percent by weight corrected to zero percent moisture content.</p> <p>This value is calculated by subtracting the lowest sulfur content retained in the fired clay from the highest, unfired clay's sulfur content. For multiple test runs of a clay, the highest value shall be used for the clay, prior to firing, and the lowest value shall be used for the sulfur content retained in that fired clay.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 ; Minn. R. 7007.3000; Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2</p>
<p>Primary Sulfur Content Analysis: The Permittee shall</p> <ol style="list-style-type: none"> 1) Test the sulfur content of each shipment of red clay received. A shipment is defined as the refurbishment of the on-site stockpile for a single mining event. This includes tests of both the fired as well as unfired clay. 2) Test the sulfur content of each buff clay received annually. 3) Test the sulfur content of each shipment any other type of clay received. A shipment is defined as the refurbishment of the on-site stockpile for a single mining event. 4) Test the sulfur content for the worst case clay product mixture annually. <p>Maintain records of the results of this analysis on-site.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 ; Minn. R. 7007.3000; Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2</p>
<p>Production: less than or equal to 145,000 tons/year using 12-month Rolling Sum with no kiln exceeding 87,599 tons per year (Brick Production).</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>
<p>Fuel Usage: less than or equal to 50,000 gallons/year of fuel oil burned in the dryers.</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>
<p>Sulfur Content of Fuel: less than or equal to 0.25 percent by weight</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>
<p>Fuel Oil Usage Recordkeeping: by the 15th day of the month:</p> <p>Record the total fuel oil usage during the previous month and previous 12-month rolling sum period.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR 52.21; Minn. R. 7007.0800, subps. 4 and 5</p>
<p>Sulfur Content Recordkeeping: The Permittee shall maintain records of vendor certifications for each fuel oil purchase. Certification shall include the name of the oil supplier and a statement of the sulfur content of the shipment, by weight.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR 52.21; Minn. R. 7007.0800, subps. 4 and 5</p>
<p>Brick Production Recordkeeping: by the 15th day of every month, record the tons of bricks produced during the previous month in tons, then calculate and record the new 12-month rolling sum of bricks produced.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR 52.21; Minn. R. 7007.0800, subps. 4 and 5</p>
<p>ALTERNATE OPERATING LIMIT (applies only in the event that sulfur content of clay exceeds the above 0.083% by weight sulfur content limit)</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Sulfur Dioxide: less than or equal to 240.0 tons/year using 12-month Rolling Sum</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>
<p>Alternate Limit, continued</p> <p>Each month, test the sulfur content of each clay type being processed, maintain records of this analysis on site, and use the information to calculate the monthly SO2 emissions.</p> <p>When the sulfur content has been below 0.083% for 12 consecutive months, the Permittee may return to the primary testing requirements (when the sulfur content has been below 0.083% for 12 consecutive months, the "alternate limit" and associated calculations and recordkeeping no longer apply).</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Acme-Ochs Plant
 Permit Number: 01500007 - 004

<p>Alternate Limit, continued</p> <p>By the 15th day of every month, calculate and record the SO2 emissions from the previous month using the following equation:</p> $SO_2 = \sum_{i=1}^n [B_i \times S(B_i) \times 2] + [G \times S(G) \times 0.000071]$ <p>where: SO2 = the sulfur dioxide emissions for the previous month Bi = the tons of individual clay type (i) fired during the previous month n = number of types of clays used for the previous month S(Bi) = the current percent sulfur content for the type of clay (most recent measurement). If the sulfur content is 0.09%, S(Bi) = 0.0009. 2 = conversion factor (2 tons of SO2 emitted per ton of sulfur in raw material) G = gallons of fuel oil used in both kilns during the previous month S(G) = 100 x the percent sulfur content of the fuel. If the sulfur content is 0.3%, S(G) = 0.3. 0.000071 = emission factor in units of tons/gallon of fuel oil</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>
<p>Alternate Limit, continued</p> <p>Calculate the 12-month rolling sum of the SO2 emissions by summing the most recent monthly emission calculation (as determined using the equation above and adding it to the total emission calculated for the previous 11 operating months.)</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2</p>
<p>OPERATIONAL REQUIREMENTS</p>	<p>hdr</p>
<p>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.</p>	<p>40 CFR pt. 50; Minn. Stat. Section 116.07, subs. 4a & 9; Minn. R. 7007.0100, subs. 7A, 7L & 7M; Minn. R. 7007.0800, subs. 1, 2 & 4; Minn. R. 7009.0010-7009.0080</p>
<p>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.</p>	<p>Minn. R. 7011.0020</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 4</p>
<p>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. Do not cause or permit a building or its appurtenances or a road, or a driveway, or an open area to be constructed, used, repaired, or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne. Take reasonable precautions to prevent the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate. The Commissioner may require such reasonable measures as may be necessary to prevent particulate matter from becoming airborne, including but not limited to, paving or frequent clearing of roads, driveways, and parking lots; application of dust-free surfaces; application of water; and the planting and maintenance of vegetative ground cover.</p>	<p>Minn. R. 7011.0150</p>
<p>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.</p>	<p>Minn. R. 7030.0010 - 7030.0080</p>
<p>Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).</p>	<p>Minn. R. 7007.0800, subp. 9(A)</p>
<p>The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.</p>	<p>Minn. R. 7007.0800, subp. 16</p>
<p>PERFORMANCE TESTING</p>	<p>hdr</p>
<p>Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.</p>	<p>Minn. R. ch. 7017</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Acme-Ochs Plant
 Permit Number: 01500007 - 004

<p>Performance Test Notifications and Submittals:</p> <p>Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.</p> <p>Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test</p> <p>The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.</p>	<p>Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2</p>
<p>Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.</p>	<p>Minn. R. 7017.2025, subp. 3</p>
<p>RECORDKEEPING REQUIREMENTS</p>	<p>hdr</p>
<p>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).</p>	<p>Minn. R. 7007.0800, subp. 5(C)</p>
<p>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.</p>	<p>Minn. R. 7007. 0800, subp. 5(B)</p>
<p>REPORTING/SUBMITTALS</p>	<p>hdr</p>
<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>	<p>Minn. R. 7019.1000, subp. 3</p>
<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>	<p>Minn. R. 7019.1000, subp. 2</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 1</p>
<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"> 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation. 	<p>Minn. R. 7019.1000, subp. 1</p>
<p>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.</p>	<p>Minn. R. 7007.1150 through Minn. R. 7007.1500</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-4

07/18/08

Facility Name: Acme-Ochs Plant

Permit Number: 01500007 - 004

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)
Emissions Inventory Report: due April 1 of each year. To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Acme-Ochs Plant

Permit Number: 01500007 - 004

Subject Item: GP 001 Grinding and Screening equipment

Associated Items: EU 001 Hammermill

EU 002 Screener

SV 001 Overhead door -- Grinding/Screening Building

SV 005 Overhead door -- Grinding/Screening Building

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot unless required to further reduce emissions to comply with the less stringent limit either Minn. R. 7011.0730 or Minn. R. 7011.0735. The potential to emit of EU001 and EU002 is 2.5 lb/hour. This limit applies to each unit individually.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity (Applies to each unit individually)	Minn. R. 7011.0715, subp. 1(B)
Except as provided in paragraphs (a)(2), (b), (c), and (d) of 40 CFR Section 60.670, the provisions of 40 CFR pt. 60, subp. OOO are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions.	40 CFR Section 60.670(a)(1); Minn. R. 7011.3350
An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of 40 CFR Sections 60.672, 60.674 and 60.675.	40 CFR Section 60.670(d) (1) and (d)(3); Minn. R. 7011.3350
If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a), (b) and (c) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits: (1) No owner or operator shall cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions except emissions from a vent as defined in 40 CFR Section 60.671.	40 CFR Section 60.672(e)(1); Minn. R. 7011.3350; Meet Minn. R. 7011.0715, subp. 1(B)
In determining compliance with 40 CFR Section 60.672(e), the owner or operator shall use Method 22 to determine fugitive emissions. The performance test shall be conducted while all affected facilities inside the building are operating. The performance test for each building shall be at least 75 minutes in duration, with each side of the building and the roof being observed for at least 15 minutes.	40 CFR Section 60.675(b)(2); Minn. R. 7011.3350
The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 40 CFR Section 60.672 of this subpart, including reports of opacity observations made using Method 9 to demonstrate compliance with 40 CFR Section 60.672(b), (c), and (f), and reports of observations using Method 22 to demonstrate compliance with 40 CFR Section 60.672(e).	40 CFR Section 60.676(f); Minn. R. 7011.3350
Notification of any physical or operational change which increases emission rate: due 60 days (or as soon as practical) before the change is commenced.	40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1; Minn. R. 7011.3350
Replacement: Notification postmarked within 60 days after making the replacement.	40 CFR Sections 60.670(d), and 60.676; Minn. R. 7011.3350
Initial Performance Test: due 180 days after Permit Issuance to measure visible emissions.	40 CFR Sections 40.CFR 60.8(a), 60.675 and 50.676; Minn. R. 7017.2015 and Minn. R. 7011.3350
For additional applicable performance test requirements see "General Performance Test Requirements" in Table A, subject item "Total Facility".	

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-6 07/18/08

Facility Name: Acme-Ochs Plant

Permit Number: 01500007 - 004

Subject Item: EU 003 Tunnel Kiln (Dryer Portion)**Associated Items:** SV 002 Tunnel Kiln (dryer portion) exhaust

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. The potential to emit of EU003 is 1.55 lb/hour.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-7 07/18/08

Facility Name: Acme-Ochs Plant

Permit Number: 01500007 - 004

Subject Item: EU 004 Tunnel Kiln (Kiln Portion)**Associated Items:** SV 003 Tunnel Kiln (kiln portion) exhaust

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. The potential to emit of EU004 is 8.74 lb/hour.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
OPERATING REQUIREMENTS	hdr
Fuel: Limited to natural gas only.	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
The Permittee shall keep records of the fuel type on a monthly basis.	Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 12/28/2005 to measure opacity. The next performance test required under this condition must be completed by December 28, 2010. Opacity performance test will be performed by a certified opacity reader using EPA Test Method 9. For additional applicable performance test requirements see "General Performance Test Requirements" in Table A, subject item, "Total Facility".	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-8 07/18/08

Facility Name: Acme-Ochs Plant

Permit Number: 01500007 - 004

Subject Item: EU 005 Monorail - Packaging Equipment**Associated Items:** SV 004 Monorail exhaust point

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. The potential to emit of EU005 is 1.66 lb/hour.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-9 07/18/08

Facility Name: Acme-Ochs Plant

Permit Number: 01500007 - 004

Subject Item: EU 006 Tunnel Kiln #2 (Dryer Portion)

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than 0.30 grams/dry standard cubic meter of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. The potential to emit of EU 006 is 1.55 lbs/hour.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 12/28/2005 to measure opacity. The next performance test required under this condition must be completed by December 28, 2010. Opacity performance test will be performed certified opacity reader using EPA Test Method 9. For additional applicable performance test requirements see "General Performance Test Requirements" in Table A, subject item, "Total Facility".	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-10

07/18/08

Facility Name: Acme-Ochs Plant

Permit Number: 01500007 - 004

Subject Item: EU 007 Tunnel Kiln #2 (Kiln Portion)

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. The potential to emit of EU007 is 8.80 lb/hour.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715 subp. 1(B)
OPERATING REQUIREMENTS	hdr
Fuel: Limited to natural gas only.	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
The Permittee shall keep records of the fuel type on a monthly basis.	Minn. R. 7007.0800, subp. 5

TABLE B: SUBMITTALS

B-1 07/18/08

Facility Name: Acme-Ochs Plant
Permit Number: 01500007 - 004

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

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

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

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

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

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

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 07/18/08

Facility Name: Acme-Ochs Plant

Permit Number: 01500007 - 004

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup	GP001
Performance Test Notification (written)	due 30 days before Performance Test	GP001

TABLE B: RECURRENT SUBMITTALS

B-3 07/18/08

Facility Name: Acme-Ochs Plant

Permit Number: 01500007 - 004

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 08/07/2000. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit was issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year starting 08/07/2000 (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner, and to the U.S. EPA regional office in Chicago. This report covers all deviations experienced during the calendar year. The EPA copy shall be sent to: Mr. George Czerniak, Chief, Air Enforcement and Compliance Assurance Branch, Air and Radiation Division, EPA Region V, 77 West Jackson Boulevard, Chicago, Illinois 60604	Total Facility

APPENDIX I – Insignificant Activities

Facility Name: Acme-Ochs Brick Plant

Permit Number: 01500007-004

Insignificant Activities and Applicable Requirements

Minn. R. 7007.1300, subpart	Rule Description and Actual Description of the Activity	Applicable Requirement
3(A)	<p>Space heaters fueled by kerosene, natural gas, or propane.</p> <p>Natural gas fired space heaters</p>	Minn. R. 7011.0510/0515
3(E)(2)	<p>Non-hazardous pollutant VOC storage tanks with a combined total tankage capacity of not more than 10,000 gallons of non-hazardous air pollutant VOCs</p> <p>2 – 3000 gallon VOC storage tanks</p>	Minn. R. 7011.1505
3(I)	<p>Individual emission units each of which have a potential to emit less than 4000 pounds per year of CO, and 2000 pounds per year of NO_x, SO₂, PM, PM₁₀, VOCs, and ozone.</p> <p>Body additive process (PTE 9.6 lb/yr PM)</p> <p>Body additive process (PTE 67 lb/yr PM)</p> <p>Sand dryer (PTE 1000 lb/yr PM, 0.02 lb/yr SO₂, 4.9 lb/yr NO_x, 0.1 lb/yr VOC, 1.2 lb/yr CO)</p> <p>Brick extruder (PTE 1580 lb/yr PM)</p> <p>Rock facer (PTE 1380 lb/yr PM)</p>	Minn. R. 7011.0710/0715
4(B)	<p>Emission units with actual emissions less than one ton per year of PM, PM₁₀, NO_x, SO₂, and VOCs</p> <p>2 cement mixers (actual emissions 0.04 tpy PM each)</p> <p>Feed hopper (actual emissions 0.2 tpy PM)</p> <p>3 raw material feed belts (actual emissions 0.18 tpy PM each)</p> <p>Kiln car/holding room (actual emissions 0.17 tpy PM each)</p> <p>Waste product transfer (actual emissions 0.34 tpy PM)</p> <p>Main plant packaging line (actual emissions 0.019 tpy PM)</p> <p>2 octagon packagers (actual emissions 0.3 tpy PM each)</p> <p>Clay Dryer (actual emissions 0.23 tpy PM/PM₁₀/0.60 tpy NO_x/0.98 tpy SO₂/ 0.03 tpy VOCs)</p> <p>Grog Crusher (actual emission 0.28 tpy PM)</p>	Minn. R. 7011.0710/0715
	<p>Stockpile loading/unloading (actual emissions 0.2 tpy PM)</p> <p>Red clay stockpile (actual emissions 0.11 tpy PM)</p> <p>Buff clay stockpile (actual emissions 0.004 tpy PM)</p>	Minn. R. 7011.0150

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 01500007-004

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 preliminary determination to issue the permit.

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 3251)
Acme-Ochs Brick Plant P.O. Box 106 Springfield, Minnesota 56087-0106	Acme Brick Company 801 Rock St E Springfield, Minnesota 56087-0106 Brown County
Contact: Phillip Weller Phone: (507) 723-4221	

1.2. Description of the Permit Action

Acme-Ochs Brick Plant (formerly Ochs Brick Company) manufactures bricks from clay. Clay is mined off site. The clay is milled and screened to create a consistent material. Water is added as necessary to create the correct consistency for extruding and forming the brick. The brick material is extruded and cut to produce bricks of the correct size. The bricks are then stacked and passed through a heating and drying chamber prior to the firing kiln. Fired bricks are then stacked on pallets for storage and shipment.

The primary source of air pollution is the firing kiln. Emissions are combustion products of natural gas or distillate oil, and gaseous emissions driven off as the clay is fired. The emissions from the kiln include sulfur dioxide, hydrogen fluoride, and hydrogen chloride. The facility has accepted limits on the annual quantity of bricks produced, the sulfur content of the clay used, and the sulfur content of the distillate oil combusted. These limits maintain the potential emissions of sulfur dioxide below 250 tons per year.

This permit action is a Part 70 permit reissuance.

1.3. Description of any Changes Allowed with this Permit Issuance

The permit authorizes an ownership and name change of the stationary source from Ochs Brick Company to Acme-Ochs Brick Plant. This permit does authorize new insignificant emission units.

1.4. Permit History

Permit Number and Issuance Date	Action Authorized
01500007-001 August 7, 2000	Initial Title V (Total Facility Operating Permit).
01500007-002 January 17, 2001	Authorized the addition of a 36 MMBtu kiln/dryer. The combined capacity of the kiln\dryer is 8.28 tons per hour of dried brick. The installation required construction of a new building attached to the existing kiln/dryer building.
01500007-003 May 6, 2003	Non-mandatory re-opening of the permit by the MPCA to change the Title V modeling requirements to reflect the MPCA policy dated August 10, 2001. This permit action changed the requirements from submittal of a protocol and modeling results, to the submittal of computer dispersion modeling information only.

1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary

	PM tpy	PM₁₀ tpy	SO₂ tpy	NO_x tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	233.0	131.5	240.0	68.9	111.4	5.51	99.0	112.0
Total Facility Actual Emissions (2006)	43.87	32.78	22.51	20.64	47.70	2.30	HAPs not reported in emission inventory	

Table 2. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD	NA	SO ₂	PM, PM ₁₀ , PM _{2.5} , VOC, NO _x , Pb, and CO
Part 70 Permit Program	PM ₁₀ , CO, SO ₂ and HAPs		VOC and NO _x
Part 63 NESHAP	NA	NA	NA

1.6. Changes to Permit

The following types of changes have been made in the reissued permit:

- updated to reflect current MPCA templates and standard citation formatting;
- changed the SO₂ limit from 249 tpy to 240.0 tpy to reflect the MPCA current guidance;
- changed the sulfur content limit on the clay from 0.065% to 0.083%, decreased the fuel oil usage to 50,000 gallons per year, decreased the sulfur content limit 0.25% by weight;
- the Permittee previously accepted a 99.0 tpy SO₂ emission limit for EU007 to avoid being subject to an Environmental Assessment Worksheet (EAW) review (see permit 01500007-002). The previous permit included a clay sulfur content limit of 0.065%. This limited the SO₂ emissions from EU007 to less than 100 tpy. With the recent changes of the EAW thresholds, the permit limit was removed and the facility maintained the total facility emission of less than 250 tpy;
- revised potential emission calculation spreadsheet to include calculations of limits pursuant to Minn. R. 7011.0715 for EU006 and EU007 (SV006 and SV007);
- revised narrative descriptions of certain equipment (insignificant activity: rock facer) at the request of the facility; and
- changed in ownership and name change of the facility.

2. Regulatory and/or Statutory Basis

New Source Review

The facility is an existing non-major source under New Source Review regulations. No changes are authorized by this permit to change the status. Because this source is not in one of the 28 listed source categories under PSD regulations and it is not in a source category for which there is an applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted towards the determination of PSD applicability.

Part 70 Permit Program

The facility is a major source under the Part 70 permit program.

New Source Performance Standards (NSPS)

The requirements of New Source Performance Standards (NSPS) 40 CFR pt 60, subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) are included in this permit. The facility was in existence prior to August 31, 1983. MPCA approved construction of a replacement grinder (EU001) and a replacement screener (EU002) in 1995. The new equipment was a replacement for larger units, so there was no increase in emission rates. These changes are not considered modifications as defined in 40 CFR 60.2. Pursuant to 40 CFR 60.670(d)(1), when

an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, then the new facility is exempt from the provisions of 40 CFR 60.672, 60.674, and 60.675 provided the source did not replace all of the existing facilities in the production line. To avoid future interpretation discrepancies with 40 CFR 60.670(d)(3), the Permittee volunteered to comply with the NSPS 40 CFR pt. 60, subp. OOO.

The New Source Performance Standards for Volatile Organic Liquid Storage Vessels for which construction, reconstruction, or modification commenced after July 23, 1984 (40 CFR pt. 60, Subpart Kb) are not included for the two 3,000 gallon storage tanks located at this facility. These tanks each have capacities less than 75 cubic meters (19,813 gallons). Note: These tanks qualify as insignificant activities under Minn. R. 7007.1300, subp. 3, E(2).

The requirements of New Source Performance Standards (NSPS) 40 CFR 60, Subpart UUU (Standards of Performance for Calciners and Dryers in Mineral Industries) are not included in this permit for the Tunnel Kiln #2 dryer (EU006) because it is exempt under 40 CFR Section 60.730(b)

National Emission Standards for Hazardous Air Pollutants (NESHAP)

Emission units EU001 through EU005 are not subject to 40 CFR 63, Subpart B and Minn. R. 7007.3010 (Case-By-Case MACT) because they were constructed prior to the effective date of June 29, 1998. Emission units EU006 and EU007 were constructed in 2001. EU006 has a potential to emit less than 10 tons per year of a single HAP and less than 25 tons per year of combined HAP. EU007 has the potential to emit a single HAP (hydrofluoric acid) greater than 10 tons per year and is therefore subject to this rule. However, the U.S. EPA developed a MACT standard for brick and structural clay (see 40 CFR 63, Subpart JJJJ) in which the U.S. EPA determined that existing small kilns that process less than 10 tons per hour were excluded from any requirements and are not affected sources pursuant to 40 CFR 63.8390(b). Since EU007 has a maximum processing capacity of 8.28 tons per hour and the U.S. EPA determined that no MACT requirements (i.e., controls, emission limits or other requirements) would apply to existing kilns of this size, no MACT requirements were included in permit 01500007-002 (issued January 17, 2001) for EU007 pursuant to 40 CFR 63, Subpart B and Minn. R. 7007.3010.

Although the U.S. EPA promulgated 40 CFR 63, Subpart JJJJ (National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing) on May 16, 2003, this NESHAP was vacated by the United States Court of Appeals for the District of Columbia Circuit on March 13, 2007 (see *Sierra Club vs EPA*, 2007 U.S. App LEXIS 5749, No. 03-1202). However, none of the emission units at this facility were affected sources under this rule. Pursuant to 40 CFR 63.8390(b), an existing affected source is an existing tunnel kiln with a design capacity equal to or greater than 10 tons per hour of fired product. Since all of the tunnel kilns at this source (EU003, EU004, EU006, and EU007) have design capacities of 8.28 tons per hour, were constructed prior to July 22, 2002, and were not reconstructed as defined in 40 CFR 63.8390(i), they meet the definition of existing small kilns and were not subject to any

requirements under Subpart JJJJ. However, since this source is a major source under Section 112 of the Clean Air Act and belongs to a source category (Brick and Structural Clay Products Manufacturing) that is one of the listed source categories for which the U.S. EPA was required to develop a NESHAP, the provisions of Section 112(j) of the Clean Air Act (the MACT Hammer rules) apply to this facility. The company will submit a 112(j) application to the MPCA. No further action will be taken.

Compliance Assurance Monitoring (CAM)

Pursuant to 40 CFR pt. 64.2, Compliance Assurance Monitoring (CAM) is applicable to emission units that involve a pollutant-specific emission unit that meets the following criteria:

- (1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;
- (2) is subject to an emission limitation or standard for that pollutant; and
- (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

None of the emission units at this source meet all three of the above criteria; therefore, none of the emission units at this source are subject to 40 CFR pt. 64 (CAM).

Minnesota State Rules

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

- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment

Table 3 summarizes the Minnesota State Rules applicable to emission units at this facility.

Table 3. Regulatory Overview of Facility

EU, GP, or SV	Applicable Regulations	Comments:
Total Facility (TF)	40 CFR § 52.21 and Minn. R. 7007.3000	Title I Condition: Prevention of Significant Deterioration (PSD). Limits taken to avoid major source classification under PSD for all emissions of SO ₂ . Primary limit consists of limit on sulfur content of clay and quantity of bricks produced. Alternate limit applies only if sulfur content of clay exceeds limit (an unlikely event). In that case, Permittee must measure the sulfur content monthly, and do monthly calculations of actual SO ₂ emissions.

EU, GP, or SV	Applicable Regulations	Comments:
TF	Minn. R. chs 7002, 7007, 7009, 7011, 7019, 7030	Table A contains requirements to ensure emissions do not cause a violation of the ambient air quality standards.
EU001, EU002, EU003, EU004, EU005, EU006, EU007	Minn. R. 7011.0715	Standards of Performance for New Industrial Process Equipment. This standard includes limits for particulate matter and opacity.
TF	40 CFR pt. 50; Minn. R. 7009.0010-7009.0080	Modeling requirements to ensure emissions do not cause a violation of the ambient air quality standards. The Permittee submitted the computer dispersion modeling information to the MPCA. Note: the source complied with MPCA's policy in 2003. No further information is required at this time.
TF	Minn. R. 7030.0010-7030.0080	Noise Standard, which applies to all facilities in Minnesota. This is state-only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act. They refer to permit requirements that are mandated by state law rather than by the federal Clean Air Act. The language is to clarify the distinction between permit conditions that are required by federal law and those are required by state law. State law requirements are not enforceable by US EPA or by citizens under the federal Clean Air Act, but are fully enforceable by the MPCA and citizens under provisions of state law.

3. Technical Information

- The permit includes a brick production limit of 145,000 tons per year and a sulfur content limit on the clay of 0.083%.
- The permit includes a facility-wide fuel oil usage limit of 50,000 gallons per year and a sulfur content limit of 0.025% by weight for the fuel oil to limit SO₂ emissions.

The stockpiles are generally replenished twice per year from the same mine source. Ochs currently uses four types of clay: two RED clays (sulfur containing) [Springfield Red and Courtland Red] and two BUFF clays (minimal sulfur clay) [Courtland Buff and Sleepy Eye Buff]. Tests showed a sulfur content of 0.083% and 0.048% for the Courtland Red

clay. The testing also showed that 0.012% and 0.013% sulfur remain within the product (bricks). The sulfur content of the Springfield Red and the two Buff clays are expected to be significantly lower than that of the Courtland Red.

Actual brick production varies significantly between products. However, bricks are never made with only one clay type. The worst case product is made with a 50/50 mix of two red clays (Springfield Red and Courtland Red). Sulfur content of the mixture is anticipated to be less than the worst case Red clay sulfur content (Courtland Red). Typically, the red clays are run with buff clays. Although it is potentially possible to run a product at 100% Courtland Red clay, it is not currently being done and will not be done in the future.

Since a percent of the sulfur content is retained in the fired clay, this permit allows the percent sulfur retained in the bricks to be subtracted from the percent sulfur in the unfired clay.

The permit requires that sulfur content analyses be conducted on each shipment of clay received.

- Note: there are “alternate limits” controlling SO₂ emissions from the facility. The alternate limits are in place to ensure that the SO₂ emissions do not exceed 250 tons per year for the entire facility (to remain a minor source under PSD). The permitted sulfur content (0.085%) is based on test results, and it is unlikely that the clay supply would suddenly increase in sulfur content. However, if that occurs, the Permittee will measure the sulfur content of the clays used monthly and calculate SO₂ emissions monthly to ensure that they do not exceed 250 tons per year for the entire facility. If the alternate limit is triggered (i.e., if the sulfur content of any clay type exceeds 0.083%), the procedures associated with the alternate limit must continue until the sulfur content has been below 0.083% for 12 consecutive months.

3.1 Calculations of Potential to Emit

Attachment 1 to this TSD contains a summary of the PTE of the Facility, as well as detailed spreadsheets and supporting information prepared by the MPCA using data provided by the Permittee.

3.2 Periodic Monitoring

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

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

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

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

Table 4. Periodic Monitoring

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
Total Facility (TF) SO ₂ and PM limits	<p>a. Brick Production: ≤ 145,000 tons per year based on a 12-month rolling sum. (limit to avoid NSR)</p> <p>Fuel Usage: ≤ 50,000 gallons per year based on a 12-month rolling sum (limit to avoid NSR)</p> <p>Sulfur Content of Fuel ≤ 0.25 percent by weight (limit to avoid NSR)</p> <p>b. SO₂ : ≤ 240.0 tons per year based on 12-month rolling sum (limit to avoid NSR)</p> <p>Sulfur Content for Clay Type: ≤ 0.083 percent by weight corrected to zero percent moisture content (limit to avoid NSR)</p>	<p><u>a. Primary limit:</u> Maintain records of brick production; Test for the sulfur content of each shipment of clay; Keep fuel oil usage and sulfur content records;</p> <p><u>b. Alternative Limit:</u> Test the sulfur content of clay monthly; Recordkeeping of monthly calculations of SO₂ emissions. On going recordkeeping to verify and certify on an annual basis to maintain the source is a non-major status</p>	<p>The company will calculate and maintain records of the 12-month rolling sum of production, SO₂ and fuel usage emission limits on a monthly basis. These limits maintain SO₂ and PM emissions below the PSD threshold of 250 tpy each. A 12-month rolling sum is warranted due to the substantial and unpredicted variation in their production.</p>

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
GP 001, EU001, EU002, EU003, and EU005,	PM/PM ₁₀ : variable depending on the airflow (Minn. R. 7011.0715) Opacity: ≤ 20% (Minn. R. 7011.0175) Visible Fugitive Emissions: 40 CFR pt. 60, subp. 000	PM/PM ₁₀ : None Initial Performance test.	State rules require the permit to contain an emission limit for total PM, even through the actual emission rate for PM is extremely low. For each of these units, the potential to emit of the equipment based on AP-42 emission factors is far less than the amount allowed by the rule. No control equipment is required to achieve the limits. The likelihood of violating the PM and opacity emission standard is impossible as long as the units are properly maintained; therefore, there is no additional periodic monitoring is required. The Permittee will comply with 40 CFR pt. 60, subp. 000, performance test requirements.
EU004	PM/PM ₁₀ : variable depending on the airflow (Minn. R. 7011.0715) Opacity: ≤ 20% (Minn. R. 7011.0175) Fuel Restriction: Natural gas and fuel oil (Minn. R. 7007.0800; Minn. Stat. 116.07	Recordkeeping and performance test	The PTE were based on the industrial process equipment rule. The PTE were evaluated after the capacity was corrected for the kiln/dryer. With a significant reduction on the PTE for the unit, the performance test was reevaluated to an opacity test only. Based on the test results from the performance test on December 28, 2005, testing frequency was determined for the unit. The next opacity performance test required for the unit must be completed by December 28, 2010.

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
EU 006	PM/PM ₁₀ : variable depending on the airflow (Minn. R. 7011.0715) Opacity: ≤ 20% (Minn. R. 7011.0175)	Performance test	With a significant reduction on the PTE for the unit, the performance test was reevaluated and particulate matter and opacity were required for this unit. Based on the test results from the performance test on December 28, 2005, testing frequency was determined for the unit. The next opacity performance test required for the unit must be completed by December 28, 2010.
EU007	PM/PM ₁₀ : variable depending on the airflow (Minn. R. 7011.0715) Opacity: ≤ 20% (Minn. R. 7011.0175)	None	State rules require the permit to contain an emission limit for total PM, even through the actual emission rate for PM is extremely low. For each of these units, the potential to emit of the equipment based on AP-42 emission factors is far less than the amount allowed by the rule. No control equipment is required to achieve the limits. The likelihood of violating the PM and opacity emission standard is impossible as long as the units are properly maintained; therefore, there is no additional periodic monitoring is required.

3.3 Insignificant Activities

Acme-Ochs Brick Plant has several operations which are classified as insignificant activities. These are listed in Appendix I to the permit.

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

Table 5. Insignificant Activities

Insignificant Activity	General Applicable Emission limit	Discussion
<p>Fuel use: space heaters fueled by, kerosene, natural gas, or propane.</p>	<p>PM \leq 0.6 lb/mmBtu Opacity \leq 20 % (Minn. R. 7011.0510, Minn. R. 7011.0515)</p>	<p>Based on the fuels used and EPA published emissions factors, it is highly unlikely that these units could violate the applicable requirements.</p>
<p>Non-hazardous pollutant VOC storage tanks with a combined total tankage capacity of not more than 10,000 gallons of non-hazardous air pollutant VOCs</p>	<p>Install a permanent submerged fill pipe or equip with a floating roof, a vapor recovery system, or their equivalents depending on vapor pressure. (Minn. R. 7011.1505)</p>	<p>This requires installation of certain equipment and does not set an emission limit. Therefore, periodic monitoring of these units is not necessary.</p>
<p>Individual emissions units, each of which have a potential to emit the following pollutants in amounts less than: 1. 2 tpy of CO; and 2. 1 tpy each of NO_x, SO₂, PM/PM₁₀, and VOC (including HAP – containing VOC)</p>	<p>PM \leq the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735 under actual operating conditions, never to exceed 0.3 grains per dry standard cubic foot of exhaust gas. Opacity \leq 20% except for one six-minute period per hour of not more than 60%. (Minn. R. 7011.0710, Minn. R. 7011.0715)</p>	<p>These emission units are body additive processes, a brick extruder, a rock facer, and a sand dryer. Each of these units has very low potential emissions based on data provided by the Permittee. It is highly unlikely that these units could violate the applicable requirements.</p>
<p>Individual emissions units that have actual emissions of \leq 1 ton per year of the criteria pollutants</p>	<p>PM \leq the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735 under actual operating conditions, never to exceed 0.3 grains per dry standard cubic foot of exhaust gas. Opacity \leq 20% except for one six-minute period per hour of not more than 60%.</p>	<p>These emission units include two cement mixers, a feed hopper, raw material feed belts, a kiln/car holding room, waste product transfer, the main plant packaging line, 2 octagon packagers, stockpile loading/unloading, a red clay stockpile, a buff clay stockpile clay dryer and grog crusher. All have very low actual emissions based on data provided by the Permittee. It is highly unlikely that these units could violate the applicable requirements. The permit contains a general requirement that the Permittee take reasonable measures to prevent</p>

Insignificant Activity	General Applicable Emission limit	Discussion
	Requirement to take reasonable measures to prevent PM from becoming airborne. (Minn. R. 7011.0710, Minn. R. 7011.0715, Minn. R. 7011.0150)	PM from becoming airborne. No additional periodic monitoring is required for the fugitive insignificant emissions.

3.4 Permit Organization

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements.

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

Another way this permit deviates slightly from Delta guidance is that the Minnesota standards for the industrial process equipment limits listed for GP001. In general, limits that apply to individual pieces of equipment should be tracked at the stack or unit level and should not be listed as a GP. The main reason is if there is noncompliance with a limit by one unit within the group, the computer system would say the whole group was out of compliance. This is a computer tracking issue. In this case, the units included in GP001 are grouped by AP-42 for purposes of emission calculation. The emission factor is for the two operations combined. Since they are subject to identical requirements, and testing is not required (so there are no "Delta trackable" requirements), all limits were placed at the GP level.

3.5 Comments Received

Public Notice Period: [May 29, 2008 – June 27, 2008](#)

EPA 45-day Review Period: [May 29, 2008 – July 14, 2008](#)

Comments were not received from the public during the public notice period. The public notice was stamped June 3, 2008, from the Lac Vieux Desert Band of Lake Superior Chippewa Indians that indicated that they have no interest in this permit action. In addition, no comments were received from EPA during their review period.

4. Conclusion

Based on the information provided by Acme-Ochs Brick Company, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 01500007-004, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Amrill Okonkwo (permit writer/engineer)
 ERG/SE (MPCA contractor/permit writer)
 Brent Rohne (enforcement)
 Bruce Braaten (peer reviewer)

AQ File No. 1738; DQ 391

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

ATTACHMENT 1
EMISSIONS CALCUALTIONS (MPCA)
(Excel Spreadsheets, paper copy only)

ATTACHMENT 2
FACILITY DESCRIPTION and CD-01 FORMS
(Delta Printouts, paper copy only)