

AIR EMISSION PERMIT NO. 03700115-001

IS ISSUED TO

EDWARD KRAEMER & SONS, INC. - QUARRY

1020 Cliff Road West
Burnsville, Dakota County, MN 55337

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

Permit Type
Total Facility Operating Permit

Application Date
06/15/1996 (Updated 02/15/2005)

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

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

Issue Date: March 7, 2006

Expiration: March 7, 2011
All Title I Conditions do not expire.

Richard J. Sandberg, Manager
Air Quality Permits Section
Industrial Division

for Sheryl A. Corrigan
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:

The facility mines and processes crushed limestone and sand for use in various construction applications. The facility processes include, drilling, blasting, crushing, screening, and transport of crushed limestone and sand. Emissions are primarily dust from the processing and hauling of the material. Pollution control measures include monitoring of material moisture content and the addition of water sprays to reduce the occurrence of dust.

PERMIT DESCRIPTION:

This permitting action is the initial issuance of a Federal Part 70 operating permit for the entire facility.

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-1

03/07/06

Facility Name: Edward Kraemer & Sons Inc - Quarry

Permit Number: 03700115 - 001

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

Subject Item: Total Facility

What to do	Why to do it
SOURCE-SPECIFIC REQUIREMENTS	hdr
Feed Material Moisture Content: greater than or equal to 1.5 percent	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
Demonstrate feed material moisture content by either 1 or 2 below: 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: a. Use American Society for Testing and Materials (ASTM) method numbers D 2216-92 or D 4643-93 (or equivalent). b. Keep records of each moisture content test summarizing the method used, results, date, time, and initials of person performing test. 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.	Title I Condition: Monitoring for limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
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:	CONTINUED: Title I Condition: Monitoring for limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
(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. OR 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.	CONTINUED: Title I Condition: Monitoring for limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
Non-Process Dust Control: All reasonable measures shall be taken to prevent avoidable amounts of particulate matter from becoming airborne. In a practical manner this refers to preventing avoidable visible dust emissions beyond the lot line surrounding the stationary source. Control of non-process dust emissions can be achieved through such measures as applying water or commercially available dust suppressant to stockpiles, 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. The Permittee must keep a copy of these manufacturer's guidelines. 4. Record the location (e.g., on a site sketch) of water or dust suppressant application.	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
5. Install a rain gauge at the site and record the precipitation in the previous 24 hours for each day of operation at the site. 6. Make and record basic weather observations according to the MPCA Weather Summary Criteria that best characterize each operating day. 7. Unpaved roads at the site shall be posted with speed limit signs indicating a maximum speed of 10 miles per hour. 8. Equipment to apply water or dust suppressant shall always be available at the site or on call for use at the site within a given operating day.	CONTINUED: Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2

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

03/07/06

Facility Name: Edward Kraemer & Sons Inc - Quarry

Permit Number: 03700115 - 001

Labeling Requirements: 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 within 60 days of permit issuance. The number shall be permanently affixed and maintained so that it is readable and visible at all times from a safe distance at each stationary source. This number shall correspond to the number contained in records regarding the piece of equipment.	Minn. R. 7007.0800, subp. 2
Material Usage: less than or equal to 3750000 tons/year using 12-month Rolling Sum . This sum includes material processed on site by equipment owned and operated by third parties.	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
Recordkeeping - Throughput: Daily record the quantity of material processed at the site and by the 15th of the following month calculate and record the 12-month rolling sum. Keep records on site.	Title I Condition: Record keeping for limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp.
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
MONITORING REQUIREMENTS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-3**

03/07/06

Facility Name: Edward Kraemer & Sons Inc - Quarry

Permit Number: 03700115 - 001

Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
MODELING REQUIREMENTS	hdr
RECORDKEEPING	hdr
Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007. 1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007. 0800, subp. 5(B)
REPORTING/SUBMITTALS	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Emission 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: Edward Kraemer & Sons Inc - Quarry
Permit Number: 03700115 - 001

Subject Item: GP 001 NSPS Limits (Crushers)

Associated Items: EU 005 Crushing 1
EU 007 Crushing 2 - Cone
EU 008 Crushing 3 - Cone Crusher
EU 011 Crushing 4 - VSI
EU 012 Crushing 4 - Cone
EU 021 Crushing - Small Plant

What to do	Why to do it
Opacity: less than or equal to 15 percent opacity	40 CFR Section 60.672(c) and Minn. R. 7011.3350

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Edward Kraemer & Sons Inc - Quarry
Permit Number: 03700115 - 001

Subject Item: GP 002 NSPS Limits (Other Equipment)

- Associated Items:
- EU 004 Rip Rap Screening
 - EU 006 Burma Screening
 - EU 009 Screening 3 - West
 - EU 010 Screening 3 - East
 - EU 013 Screening 4 - North
 - EU 014 Screening 4 - South
 - EU 017 Screening - PEP

What to do	Why to do it
Opacity: less than or equal to 10 percent opacity	40 CFR Section 60.672(b) and Minn. R. 7011.3350

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Edward Kraemer & Sons Inc - Quarry
Permit Number: 03700115 - 001

Subject Item: GP 003 NSPS Limits (Wet Processing)

Associated Items: EU 020 Wash Screens - Small Plant

What to do	Why to do it
Visible emissions: No visible emissions from wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to the next crusher, grinding mill or storage bin.	40 CFR Section 60.672(h)(1) and Minn. R. 7011.3350

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-7**

03/07/06

Facility Name: Edward Kraemer & Sons Inc - Quarry

Permit Number: 03700115 - 001

Subject Item: EU 001 Air Compressor - Gasoline**Associated Items:** SV 001 Gasoline Air Compressor

What to do	Why to do it
Allowed fuels. Gasoline. No other fuels shall be used.	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
Opacity: less than or equal to 20 percent opacity once operating temperature has been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input	Minn. R. 7011.2300, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-8**

03/07/06

Facility Name: Edward Kraemer & Sons Inc - Quarry

Permit Number: 03700115 - 001

Subject Item: EU 003 Diesel Generator**Associated Items:** SV 002 Diesel Generator

What to do	Why to do it
Allowed fuels. Diesel fuel. No other fuels shall be used.	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
Fuel Usage: less than or equal to 366500 gallons/year using 12-month Rolling Sum	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
Recordkeeping - Fuel Use: By the 15th of the following month, record the quantity of fuel consumed in the engine and calculate the 12-month Rolling Sum. Keep records on site.	Title I Condition: Recordkeeping for limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
Opacity: less than or equal to 20 percent opacity once operating temperature has been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input	Minn. R. 7011.2300, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Edward Kraemer & Sons Inc - Quarry
Permit Number: 03700115 - 001

Subject Item: EU 014 Screening 4 - South

Associated Items: GP 002 NSPS Limits (Other Equipment)

What to do	Why to do it
For equipment put in operation on or after 7/9/69: Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
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.	Minn. R. 7011.0715, subp. 1(A)

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-10**

03/07/06

Facility Name: Edward Kraemer & Sons Inc - Quarry

Permit Number: 03700115 - 001

Subject Item: EU 019 Diesel Generator on Mobile Jaw Crusher**Associated Items:** SV 003 Diesel Generator

What to do	Why to do it
Allowed fuels. Diesel fuel. No other fuels shall be used.	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
Fuel Usage: less than or equal to 2000 gallons/year using 12-month Rolling Sum	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
Recordkeeping - Fuel Use: By the 15th of the following month, record the quantity of fuel consumed in the engine and calculate the 12-month Rolling Sum. Keep records on site.	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 and under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2
Opacity: less than or equal to 20 percent opacity once operating temperature has been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input	Minn. R. 7011.2300, subp. 2

TABLE B: SUBMITTALS**B-1** 03/07/06

Facility Name: Edward Kraemer & Sons Inc - Quarry
Permit Number: 03700115 - 001

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

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

Send any application for a permit or permit amendment to:

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

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

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

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

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

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

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**B-2** 03/07/06

Facility Name: Edward Kraemer & Sons Inc - Quarry

Permit Number: 03700115 - 001

What to send	When to send	Portion of Facility Affected
Computer Dispersion Modeling Protocol	due 180 days after Permit Issuance for PM10. This protocol will describe the proposed modeling methodology and input data, in accordance with MPCA modeling guidance for Title V air dispersion modeling analyses. This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Total Facility
Computer Dispersion Modeling Results	due 365 days after Permit Issuance for PM10. To be submitted after the MPCA has reviewed and approved the modeling protocol. The submittal should adhere to MPCA modeling guidance for Title V air dispersion modeling analyses. This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Total Facility

TABLE B: RECURRENT SUBMITTALS**B-3** 03/07/06

Facility Name: Edward Kraemer & Sons Inc - Quarry

Permit Number: 03700115 - 001

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 30 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted to the Commissioner on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year.	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year following Permit Issuance To be submitted on a form approved by the Commissioner.	Total Facility

APPENDIX MATERIAL

Facility Name: Edward Kraemer & Sons Inc - Quarry
Permit Number: 03700115-001

WEATHER SUMMARY CRITERIA

Sky Conditions

CLR	<1/10 cloud coverage
SCT (Ptly Cldy)	1/10-5/10 cloud coverage (opaque)
BKN (Mstly Cldy)	6/10-9/10 cloud coverage (opaque)
OVC (Cloudy)	10/10 cloud coverage (opaque)
THN OVC	Sky is completely covered with high thin clouds and <5/10 cloud coverage is opaque

Note: The cloud coverage is a cumulative total of all cloud layers.

Weather Conditions

Fog	May also be associated with drizzle and may obstruct sky
Drizzle	Small particles of rain many times associated with fog
Lt Rain	Continuous falling at a light rate (good horizontal visibility)
Mod Rain	Continuous falling at a mod. rate (horiz. visibility decreased)
Hvy. Rain	Continuous falling at heavy rate; in sheets (horizontal visibility low)
T-Stm	Thunderstorm -- thunder, lightning, and usually mod. to hvy. rain
Hail	Associated with thunderstorms
Frz Rain	Rain that freezes on contact of cold objects; glazing
Sleet	Mixture of rain and ice pellets
Ice Pellets	Clear/mostly translucent pellets of ice -- not easily broken/crushed
Snw Grns/Snw Pellets	Hard/crunchy opaque (white) pellets of snow -- easily crushed
Lt Snow	Falling at a light rate; flurries (good horizontal visibility)
Mod Snow	Falling at a moderate rate (horizontal visibility decreased)
Hvy Snow	Falling at a heavy rate (poor horizontal visibility)

Wind Scale

0-10 MPH	Light Breeze	Leaves rustle
10-20 MPH	Light Wind	Small tree branches move; wind extends light flag
20-30 MPH	Mod. Wind	Large branches in motion; umbrella used with difficulty
30-40 MPH	Mod. Gale	Whole trees in motion; difficulty walking against wind
40-50 MPH	Strong Gale	Twigs break off of trees

Temperature

Approximate using a range of 5 degrees Fahrenheit if the actual temperature is not known.

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 03700115-001

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: 1422)
Edward Kraemer & Sons, Inc. – Burnsville Quarry	1020 West Cliff Road Burnsville Hennepin County
Contact: James Small Phone: (952) 224-1727	

1.2. Description of the Permit Action

The Edward Kraemer & Sons, Inc. – Burnsville Quarry mines and processes crushed limestone and sand for use in various construction applications. The facility processes include drilling, blasting, crushing, screening, and transport of crushed limestone and sand. Emissions are primarily dust from the processing and hauling of the material. Pollution control measures include monitoring of material moisture content and the addition of water sprays to reduce the occurrence of dust.

This permitting action is the initial issuance of a Federal Part 70 Operating Permit for the entire facility. The Edward Kraemer & Sons, Inc. – Burnsville Quarry is not currently eligible for the state non-metallic mineral processing plant general permit because they need a limit on Particulate Matter of less than 250 tons per year.

1.3 Permit History

Permit Number and Issuance Date	Action Authorized
June 13, 1996	Original State Permit Application
April 10, 1997	Written Notification for Replacement of a Unit
April 29, 1999	Permit Application – replacement of three crushers, new screen and conveyors
April 24, 2003	Minor amendment application – replacement of primary crusher, addition of engine for crusher movement, additional conveyors
May 6, 2003	Response to minor amendment application – no action at this time
September 17, 2003	Response to minor amendment application – concurrence with minor amendment procedures
February 15, 2005	Updated total facility application, per MPCA request

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
Total Facility Limited Potential Emissions: Process Sources	79.4	37.3	15.4	94.4	92.6	6.05
Total Facility Potential Emissions: Fugitive Sources	2138.2	651.8	0	0	0	0
Total Facility Limited Potential Emissions: All Sources	2217.6	689.1	15.4	94.4	92.6	6.05
Total Facility Actual Emissions: Fugitive Sources (2003)	68.7	51.4	0	0	0	0
Total Facility Actual Emissions: All Sources (2003)	94.0	59.6	0.07	1.02	1.08	0.12

Table 2. Facility Classification

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

2. Regulatory and/or Statutory Basis

New Source Review (NSR)

The facility is an existing synthetic minor source under New Source Review regulations for PM and particulate matter small 10 microns (PM₁₀), and nitrogen oxides (NO_x). The source is a true minor source of sulfur dioxide (SO₂), carbon monoxide (CO), and volatile organic compounds (VOC). No changes are authorized by this permit.

Part 70 Permit Program

The facility is a major source for PM and PM₁₀ (counting fugitive emissions per Minn.R. 7007.0200, subp. 2) and a synthetic minor source for NO_x under the Part 70 permit program. The source is a true minor source of sulfur dioxide (SO₂), carbon monoxide (CO), and volatile organic compounds (VOC).

New Source Performance Standards (NSPS)

The facility is subject to NSPS, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a true minor source under 40 CFR pt. 63. Thus, no NESHAPs apply.

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
- Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines
- Minn. R. 7011.3350 Standards of Performance for New Nonmetallic Mineral Processing Plants

Table 3. Regulatory Overview of Facility

EU, GP, or SV	Applicable Regulations	Comments:
Total Facility	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR § 52.21 and Minn. R. 7007.3000 and under 40 CFR § 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2	Operational limits taken to keep the potential emissions below major source thresholds (facility limit on production, and moisture content/testing)
GP 001, GP 002, GP 003	40 CFR pt. 60, subp. 000; Minn. R. 7011.3350	New Source Performance Standards (NSPS) for Nonmetallic Mineral Processing Plants. State Standards of Performance for New Nonmetallic Mineral Processing Plants (limits on opacity)
EU 049	Minn. R. 7011.0715	Standards of Performance for Post 1969 Industrial Process Equipment (limits on opacity and total PM)
EU 001, EU 003, EU 019	Minn. R. 7011.2300 and Title I Condition: Limit to avoid classification as major source and modification under 40 CFR § 52.21 and Minn. R. 7007.3000 and under 40 CFR § 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 2	Standards of Performance for Stationary Internal Combustion Engines (limits on opacity, SO ₂ , and fuel usage)

3. Technical Information

3.1 Calculations of Potential to Emit

Attachment 1 contains detailed spreadsheets and supporting information prepared by EarthTech, the MPCA and the Permittee.

In general, emission factors are taken from AP-42, Fifth Edition, Chapter 11.19.2, "Crushed Stone Processing and Pulverized Mineral Processing" August 2004. For those sources not covered in this section, emission factors from MPCA Form EC-10, "Nonmetallic Minerals Products Industry Calculation Form" November 1998 were used.

Potential fugitive emissions were not used to determine if the facility is major for PSD according to 40 CFR § 70.2 but were used to determine if the facility was major for Part 70. The potential fugitive emissions from unpaved roads were calculated assuming that the each vehicle in the fleet operates continuously 4,380 hours a year (12 hours a day). This results in a total of 810,300 vehicle miles travel each year; the 2003 actual vehicle miles travel was 61,400 (2003 Emission Inventory). All other fugitive dust emissions were estimated using 8,760 hours a year.

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	Limit to avoid NSR	Material Moisture Content	<p>The requirement to keep the moisture content of feed material greater than or equal to 1.5% is needed because the underlying emissions calculations and basis for the permit limits are based on this moisture content level. AP-42 (referenced above) has a set of process emission factors for material with moisture content greater than or equal to 1.5% and another set for material with moisture content less than 1.5%. The testing and/or recordkeeping is required to demonstrate compliance with this permit condition. In Minnesota, most sources of natural feed material are usually over 1.5%. The second alternative compliance demonstration method for this permit condition includes Recycled Asphalt Pavement (RAP). In producing asphalt pavement, there are often specifications for moisture content in excess of 1.5%. In addition, there is the presence of the asphalt cement itself with a binding effect which mitigates dust emissions. Based on the combination of these two considerations, it was concluded to be appropriate to include RAP in alternative 2. In addition, supplemental water application to RAP might have an inadvertent negative environmental effect. This is because it is often fed back into an asphalt plant where it is heated. Excess water requires the combustion of additional fuel with the associated air emissions of the products of combustion. The two compliance demonstration alternatives for this permit condition provide adequate assurance that material moisture content is greater than or equal to 1.5% without being unnecessarily burdensome.</p>
Total Facility	Limit to avoid NSR	Throughput recordkeeping	<p>To demonstrate compliance with the annual production limit, the Permittee is required to keep a daily record of the production, in tons, and monthly calculate and record a 12-month rolling sum (i.e., the current month plus the eleven preceding months). These calculations and records must be made by the 30th of the following month.</p>
Total Facility	Limit to avoid NSR	Recordkeeping items	<p>Required non-process dust control measures in order to stay below PSD thresholds.</p>

Total Facility	Minn. R. 7007.0800, subp. 2	Equipment Labels	The requirement to uniquely label equipment is needed so that compliance determinations can be made. The system of uniquely identifying each piece of equipment will also assist the Permittee in making sure that all the proper notices and initial performance tests are made.
EU 003	Diesel fuel usage <366,500 gallons/year	Fuel Use Records	To demonstrate compliance with the annual fuel use limit, the Permittee is required to keep a daily record of the fuel usage, in gallons, and monthly calculate and record a 12-month rolling sum (i.e., the current month plus the eleven preceding months). The method for determining compliance during the first 12 months parallels that found in Minn. R. 7007.1110, subp. 7. These calculations and records must be made by the 30 th of the following month.
EU 019	Diesel fuel usage <2,000 gallons/year	Fuel Use Records	To demonstrate compliance with the annual fuel use limit, the Permittee is required to keep a daily record of the fuel usage, in gallons, and monthly calculate and record a 12-month rolling sum (i.e., the current month plus the eleven preceding months). The method for determining compliance during the first 12 months parallels that found in Minn. R. 7007.1110, subp. 7. These calculations and records must be made by the 30 th of the following month.

3.3 Insignificant Activities

The table below lists the insignificant activities that are currently at the facility.

Under Minn. R. 7007.1250, subp. 1(A), the Permittee may add insignificant activities to the stationary source throughout the term of the permit without getting permit amendments. Certain exclusions apply and are listed in Minn. R. 7007.1250, subp.2. Many of the conveyor belts listed as insignificant activities are subject to NSPS, Subpart OOO, and therefore have opacity and notification requirements. In addition, this permit specifically prohibits the Permittee from making any modifications that would make the source major under NSR.

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Units
2(E)(3)	Above and below ground fuel oil storage tanks with a combined total tankage capacity less than 100,000 gallons	EU 056, EU 065, EU066
3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane.	EU 055
3(E)	Storage tanks:	
	1. gasoline storage tanks with a combined total tankage capacity of not more than 10,000 gallons; and	EU053
3(H)	Miscellaneous:	
	3. brazing, soldering or welding equipment;	EU 058, EU 060, EU 062
3(I)	Individual emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than: 1. 4,000 lbs/year of carbon monoxide; and 2. 2,000 lbs/year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, volatile organic compounds (including hazardous air pollutant-containing VOC), and ozone.	EU 059, EU 061 (Parts Washers) EU 020 (Drilling) EU 021, 022, 023, 024, 025, 026, 027, 028, 029, 031, 032, 033, 034, 035, 036, 038, 039, 040, 041, 042, 043, 044, 045, 046, 047, 048, 052, 067, 069, 071, 072, 073, 075 (Belt Conveyors) EU 050, EU 051, EU 074 (Screw Conveyors)

3.4 SCREEN3 Results

The permittee conducted SCREEN3 analyses for the three internal combustion engines at the facility. The screening analyses were performed using the maximum short-term emission rates of the engines. The results are presented below. All results are presented in units of micrograms per cubic meter.

	PM₁₀	SO₂	SO₂	NO_x	NO_x	CO	CO
	24 hour	3 hour	24 hour	1 hour	24 hour	1 hour	8 hour
Standard	150	1300	365	1130	282	40,000	10,000
EU 001	4.05	0.007	0.003	1.63	0.65	62.58	43.80
EU 003	0.803	1.69	0.75	28.57	11.43	6.15	4.30
EU 019	2.267	4.757	2.114	80.43	32.17	17.23	12.06

3.5 Permit Organization

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

3.6 Comments Received

The public notice was published January 12, 2006. No adverse comments were received during the 30 public comment period or the 45 day concurrent EPA review.

4. Conclusion

Based on the information provided by Edward Kraemer & Sons, Inc., the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 03700115-01, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Jeff Peltola, MPCA (Contractor oversight/peer review)
 Michael Westereng (Public Notice/Peer Review)
 Scott Parr, MPCA (Enforcement)

Attachments: 1. PTE Summary and Calculation Spreadsheets