AIR EMISSION PERMIT NO. 12300288- 001

IS ISSUED TO

CEMSTONE PRODUCTS COMPANY

Twin City Concrete Products Company – St. Paul
1351 Trout Brook Circle
St. Paul, Ramsey County, MN 55117

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	Application Date
Total Facility Operating Permit	06/15/1995
Minor Permit Amendment	02/13/1995
Minor Permit Amendment	4/30/1996
Revised Title V Permit Application	12/2/2002

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: May 31, 2005

Expiration: May 31, 2010
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.

Notwithstanding the foregoing permit shield protection, the MPCA and U.S. Environmental Protection Agency (EPA) specifically reserve, and the Permittee accepts the permit knowing that the MPCA or EPA may investigate, initiate and pursue enforcement action for continuing violations or violations that occurred prior to or at the time of permit issuance and that may be addressed by conditions in this permit. Enforcement action may include, but is not limited to, further corrective action and penalties.

FACILITY DESCRIPTION:

Twin City Concrete Products Co. operates a concrete bagging plant located in St. Paul, Minnesota. The facility produces a variety of bagged concrete mixes, as well as tube sand (bagged sand). The primary emission sources at the facility are the aggregate dryer, the bucket elevator, raw material silos, material storage piles, and various product-packaging lines, which include a number of emission points. The aggregate dryer burns primarily natural gas, with propane as a backup fuel.

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/31/05

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 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
Computer Dispersion Modeling Protocol: Within 120 days of Permit Issuance, the Permittee shall submit a protocol for modeling of 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.	Minn. R. 7007.0800, subp. 2
Computer Dispersion Modeling Results: The Permittee shall submit PM10 computer dispersion modeling results within 365 days of permit issuance. The results are 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.	Minn. R. 7007.0800, subp. 2
Fugitive Emissions Control Plan: The Permittee shall submit a fugitive emissions control plan within 60 days of the date of permit issuance for review and approval by the Commissioner. The plan shall identify all fugitive emission sources, primary and contingent control measures, and record keeping. The Permitee shall follow the actions and record keeping specified in the control plan. The plan may be amended by the Permittee with the Commissioner's approval. If the Commissioner determines the permitee is out of compliance with Minn. R. 7011.0150 or the fugitive emission control plan, then the permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Preventing Particulate Matter from Becoming Airborne. No owner or operator of a concrete manufacturing plant shall 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 from a concrete manufacturing plant. No owner or operator of a concrete manufacturing plant shall cause or permit a building or its appurtenances, a road, 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. The owner or operator of a concrete manufacturing plant shall take reasonable precautions to prevent the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions orginiate.	Minn. R. 7011.0857
The Commissioner may require such reasonable measures as may be necessary to prevent particulate matter from becoming airborne including, but not limited to, application of water; application of commercially available dust suppressants; paving; frequent cleaning and sweeping of roads, driveways, and parking lots; use of curtains or socks for truck loading operations; use of water sprays during truck loading operations; use of water or commercially available dust suppressants on stockpiles or aggregate transfer points; and the planting and maintenance of vegetative ground cover.	Minn. R. 7011.0857 CONTINUED
OPERATIONAL REQUIREMENTS	hdr
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 shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment 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 the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/31/05

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 001

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. 7011.0858; 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
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
RECORDKEEPING	hdr
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. 7011. 0854, subp. 4; 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/31/05

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 001

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. 7011.0859; 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. 7011.0859; 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. 7011.0859; 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. 7011.0859; Minn. R. 7019.1000, subp. 1
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/31/05

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 001

Subject Item: **GP 001 Fabric Filters - Low Temperature**

Associated Items: CE 002 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 004 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 005 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 006 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 007 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 011 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 015 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 016 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 017 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 018 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 019 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7011.0065, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7011.0065, subp. 1(A)
Pressure Drop: greater than or equal to 1.0 inches of water column and less than or equal to 6.0 inches of water column , unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7011.0080
Visible Emissions: The Permittee shall check each fabric filter stack (SV 002, SV 004-007, 011, 015-019) for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7011.0080
Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, and whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7011.0080
The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080. The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the fabric filter is operating.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7011.0065, subp. 2(A)
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7011.0075, subp. 3
The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as required by Minn. R. 7011.0075, subp. 2(A) to 2(I).	Minn. R. 7011.0075, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 001

Hood Certification and Evaluation: The control device hood shall conform to the requirements listed in Minn. R. 7011.0070, subp. 1, and the Permittee shall certify this as specified in Minn. R. 7011.0070, subp. 1 and 3. The Permittee shall maintain a copy of the certification on site, as well as an annual record of fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method, as required by Minn. R. 7011.0080. The Permittee shall perform a Hood Certification and Evaluation for CE 006, as specified in Table B.	Minn. R. 7011.0070, subp. 3; Minn. R. 7011.0080

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/31/05

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 001

Subject Item: **GP 002 Concrete Manufacturing Stacks/Equipment**

Associated Items: SV 001 Baghouse 1 stack

SV 002 Baghouse 2 stack

SV 004 Baghouse 4 stack

SV 005 Baghouse 5 stack

SV 006 Baghouse 6 stack

SV 007 Baghouse 7 stack

SV 008 Baghouse 8 stack

SV 009 Baghouse 9 stack

SV 010 Baghouse 10 stack

SV 011 Baghouse 11 stack

SV 012 Baghouse 12 stack

SV 013 Baghouse 13 stack

SV 014 Baghouse 14 stack

SV 016 Baghouse 16 stack

SV 017 Baghouse 17 stack

SV 018 Baghouse 18 stack

SV 019 Baghouse 19 stack

SV 020 Baghouse 20 stack

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735. This limit applies to each emission unit that vent to the stacks listed above as associated items. The PTE for each emission unit based on equipment design and use of control equipment is less that the limit. Appendix C of this permit lists the PTE for each emission unit.	Minn. R. 7011.0852, subp. A
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0852, subp. B

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 001

Subject Item: **GP 003 Fabric Filters - Low Temperature, Cementitious Material Storage**

Associated Items: CE 001 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 008 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 009 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 010 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 012 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 013 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 014 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 020 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7011.0065, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7011.0065, subp. 1(A)
Pressure Drop: greater than or equal to 1.0 inches of water column and less than or equal to 6.0 inches of water column , unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7011.0080
Visible Emissions: The Permittee shall check each fabric filter stack (SV 001, 008-010, 012-014, 020) for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation. During cementitious material receiving, the owner of operator of a concrete manufacturing plant, or a designee, shall observe the outlet of each piece of control equipment for any visible emissions once each day cementitious material is received.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7011.0080 & 7011.0854, subp. 3
Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, and whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7011.0080 & 7011.0854, subp. 3
The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080. The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the fabric filter is operating.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7011.0065, subp. 2(A)
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14; Minn. R. 7011.0854, subp. 3
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7011.0075, subp. 3
The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as required by Minn. R. 7011.0075, subp. 2(A) to 2(I).	Minn. R. 7011.0075, subp. 2
Hood Certification and Evaluation: The control device hood shall conform to the requirements listed in Minn. R. 7011.0070, subp. 1, and the Permittee shall certify this as specified in Minn. R. 7011.0070, subp. 1 and 3. The Permittee shall maintain a copy of the certification on site, as well as an annual record of fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method, as required by Minn. R. 7011.0080.	Minn. R. 7011.0070, subp. 3; Minn. R. 7011.0080

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 001

Operation of concrete manufacturing plant control equipment: Unless otherwise allowed in a state or part 70 permit, emissions during cementitiuous material receiving from cement silos and other cementitious material storage devices shall pass through a fabric filter. For concrete manufacturing plants in operation on December 2, 1998, the owner or operator must install control equipment no later then December 2, 1999.	Minn. R. 7011.0854, subp. 1
Operation and maintenance of fabric filter control equipment: The owner or operator of a concrete manufacturing plant shall perform the following on each piece of control equipment required in subp. 1: A. properly operate and maintain the control equipment to function as it was designed. Proper operation and maintenance includes effective performance, adequate funding, and adequate operator staffing and training; B. thoroughly conduct an internal and external inspection of control equipment at least annually, which often requires shutting down temporarily, and maintain a record of the activities conducted in the inspection including the activities completed, the date the activity was completed, and any corrective action taken; and C. maintain a record of parts replaced, repaired, or modified.	Minn. R. 7011.0854, subp. 2
Monitoring of fabric filter control equipment: During cementitious material receiving, the owner of operator of a concrete manufacturing plant, or a designee, shall observe the outlet of each piece of control equipment required in subp. 1 for any visible emissions once each day cementitious material is received, and record the date and time period during which the observation was made and whether or not any visible emissions were observed. If visible emissions are observed, the owner or operator, or a designee, shall take all practical steps to modify operations to reduce the emissions and shall take corrective action to eliminate visible emissions prior to the following business day. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants.	Minn. R. 7011.0854, subp. 3

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/31/05

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 001

Subject Item: **EU 001 Natural Gas Dryer**

Associated Items: CE 015 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 015 Baghouse 15 stack

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 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. 7011.0610, subp. 1(A)(1)
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1(A)(2)
Operate and maintain the fabric filter such that it achieves a removal efficiency for Total Particulate Matter: greater than or equal to 99.97 percent control efficiency	Title I Condition: Limit to avoid major source status per 40 CFR Section 52.21(j); Minn. R. 7007.3000
Operate and maintain the fabric filter such that it achieves a removal efficiency for Particulate Matter < 10 micron: greater than or equal to 99.97 percent control efficiency	Title I Condition: Limit to avoid major source status per 40 CFR Section 52.21(j); Minn. R. 7007.3000

TABLE B: SUBMITTALS

05/31/05

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 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:

Permit Technical Advisor
Permit Section
Air Quality 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:

Supervisor
Compliance Determination Unit
Air Quality 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

05/31/05

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Computer Dispersion Modeling Protocol	due 120 days after Permit Issuance as described in Table A under Total Facility.	Total Facility
Computer Dispersion Modeling Results	due 365 days after Permit Issuance as described in Table A under Total Facility.	Total Facility
Fugitive Control Plan	due 60 days after Permit Issuance as described in Table A under Total Facility.	Total Facility
Submittal	due 60 days after Permit Issuance. The Permittee shall submit a Hood Certification and Evaluation demonstrating that the control device hood for CE 006 conform to the requirements listed in Minn. R. 7011.0070, subp. 1, and the Permittee shall certify this as specified in Minn. R. 7011.0070, subp. 1 and 3. The Permittee shall submit the certification using Permit Application Form CR-02 Hood Certification.	GP001

TABLE B: RECURRENT SUBMITTALS

05/31/05

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 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 occured, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

TABLE C: COMPLIANCE SCHEDULE

05/31/05

Facility Name: Twin City Concrete Products Co - St Paul

Permit Number: 12300288 - 001

Table C contains the compliance schedule as required by Minn. R. 7007.0500, subp. 2 (K). You must complete the actions required in Table C by the dates listed in the table. All submittals must be postmarked or received by the date specified in the table, and certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21.

Subject Item: **EU 001 Natural Gas Dryer**

Associated Items: CE 015 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 015 Baghouse 15 stack

Citation	Corrective Action	When to complete the action
Minn. R. 7011.0610, subp. 1(A)(1)	Performance Test	due 90 days after Permit Issuance to measure Total Particulate Matter and Particulate Matter < 10 micron emissions. Emission results will be compared to permitting thresholds to determine if installation of emission unit qualified as minor modification.

APPENDIX B

Insignificant Activities and Applicable Requirements

Facility Name: Twin City Concrete Products Co. – St. Paul
Permit Number: 12300288-001

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.

The following sources at the Permittee's facility qualify as insignificant activities under Minn. R. 7007.1300, subps. 2, 3 and 4 and are not required to be listed in the permit.

Location	**Model**	**Size (Btu/hr)**	**Rule**
Production Area	Space Ray RSTP 17-N-5B	175,000	7007.1300, Subp. 3(A)
Big Bags	Robert Gordon CTH2-80	80,000	7007.1300, Subp. 3(A)
Big Bags	Robert Gordon CTH2-125	125,000	7007.1300, Subp. 3(A)
Building 4	Gordon Ray RTH 75 A	75,000	7007.1300, Subp. 3(A)
Building 4	Gordon Ray RTH 75 A	75,000	7007.1300, Subp. 3(A)
Office	Carrier 48TJE005-611	115,000	7007.1300, Subp. 3(I)
Lunchroom	Carrier 48TJE005-611	115,000	7007.1300, Subp. 3(I)
Production Area	Reznor P250	250,000	7007.1300, Subp. 3(I)
Control Room	HQCO NHGG100AH03	100,000	7007.1300, Subp. 3(I)
Building 4	Modine PAE175AC	175,000	7007.1300, Subp. 3(I)

APPENDIX C

GP002 PTE and Allowable Limits

Facility Name: Twin City Concrete Products Co. – St. Paul
Permit Number: 12300288-001

Emission Unit	PTE (lb/hr)	Minn. R. 7011.0715 Limit (lb/hr)
002	0.25	34.54
003	1.00	38.12
004	0.25	34.54
005	0.25	34.54
006	0.25	34.54
007	21.60	29.57
008	21.60	29.57
009	21.60	29.57
010	21.60	29.57
011	21.60	29.57
012	21.60	29.57
013	0.20	38.12
014	8.58	38.12
015	0.20	38.12
016	0.20	38.12
017	23.79	38.12
018	23.79	31.11
019	0.25	38.12
020	0.25	38.12
021	0.25	38.12
022	28.08	31.11
023	28.08	31.11
024	28.08	31.11
025	28.08	31.11
028	0.06	39.68
029	0.06	39.68
030	0.06	39.68
031	0.06	39.68
032	0.25	32.22
033	0.16	32.22
034	0.25	39.68
035	0.25	39.68
036	0.16	39.68
037	0.16	39.68
038	0.29	39.68
039	0.29	33.00
040	0.00	39.68
041	0.14	27.70
042	0.14	39.68
043	0.14	39.68
044	0.09	39.68
045	0.09	39.68
052	0.11	23.71

Emission Unit	PTE (lb/hr)	Minn. R. 7011.0715 Limit (lb/hr)
053	0.11	23.71
054	0.00	39.68
055	0.06	32.35
056	0.06	32.35
057	0.03	32.35
058	0.00	32.35
059	0.03	32.35
060	0.03	32.35
061	7.20	32.35
062	28.08	31.11
063	28.08	31.11
064	7.04	39.68
065	0.02	39.68
066	0.14	39.68

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 12300288-01

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 draft permit.

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 3273)
Twin City Concrete Products Co. 2025 Centre Point Boulevard, #300 Mendota Heights, MN 55120	1351 Trout Brook Circle St. Paul, Minnesota Ramsey County
Contact: Tim Becken Phone: (651) 688-9292	

1.2. Description of the Permit Action

Twin City Concrete Products Co. operates a concrete bagging plant located in St. Paul, Minnesota. The facility produces a variety of bagged concrete mixes, as well as tube sand (bagged sand). The primary emission sources at the facility are the aggregate dryer, the bucket elevator, raw material silos, material storage piles, and various product-packaging lines, which include a number of emission points. The aggregate dryer burns primarily natural gas, with propane as a backup fuel.

The purpose of this permitting action to issue the initial Part 70 permit for the Twin City Concrete Products Co.- St. Paul plant.

1.3 Description of any Changes Allowed with this Permit Issuance

No changes are authorized with the issuance of this permit.

1.4 Permit History

Permit Number and Issuance Date	Action Authorized
Part 70 Permit Application December 6, 2002	Revised Part 70 Permit Application, submitted at the request of the MPCA
Minor Amendment Application April 30, 1996	Minor Amendment Application to install two portland cement silos controlled with baghouses.
Part 70 Permit Application June 15, 1995	Part 70 Permit Application submittal
Minor Amendment Application February 13, 1995	Minor Amendment Application to replace the aggregate dryer and baghouse.
1748-79-I-1 October 11, 1979	Installation Permit for the Sakrete-Quikrete plant

1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary

	PM tpy	PM_{10} tpy	SO_2 tpy	NO_x tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	207	179	0.04	14.55	5.61	0.37	NA	NA
Total Facility Actual Emissions (2002)	34.50	17.33	0.0	3.56	0.51	0.03	HAPs not reported in emission inventory	

Note: only HAP emissions are from combustion of natural gas and propane in the dryer.

Table 2. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		PM, PM_{10}	NO_x, SO_2, VOC, CO
Part 70 Permit Program	PM_{10}		NO_x, SO_2, VOC, CO
Part 63 NESHAP	NA	NA	NA

2. Regulatory and/or Statutory Basis

New Source Review

The facility is a synthetic minor source under New Source Review regulations. No changes are authorized by this permit.

Part 70 Permit Program

The facility is a major source for PM_{10} under the Part 70 permit program.

New Source Performance Standards (NSPS)

There are no New Source Performance Standards applicable to the operations at this facility. The facility does not meet the definition of a mineral processing plant, as described in 40 CFR § 60.731. Therefore, the facility is not subject to Subpart UUU.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a true minor source of HAP emissions under 40 CFR pt. 63. Thus, no NESHAPs apply to this facility.

Minnesota State Rules

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

- Minn. R. 7011.0610 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment
- Minn. R. 7011.0850-0860 Standards of Performance for Concrete Manufacturing Plants

Table 3. Regulatory Overview of Facility

EU, GP, or SV	Applicable Regulations	Comments:
EU 001	Title I limit to avoid classification as a major source under 40 CFR § 52.21	Limit set on control efficiency for PM and PM_{10} from baghouse to avoid major source classification under 40 CFR § 52.21.
EU 001	Minn. R. 7011.0610	Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
GP 001	Title I limit to avoid classification as a major source under 40 CFR § 52.21	Limit set on control efficiency for PM and PM10 from baghouses to avoid major source classification under 40 CFR § 52.21.
Entire Facility, GP 003	Minn. R. 7011.0850 to 0860	Standards of Performance for Concrete Manufacturing Plants; applies to entire facility
GP 002	Minn. R. 7011.0715	Standards of Performance for Post 1969 Industrial Process Equipment. Emission limits apply to each emission unit individually, based on process throughput or air flow.
GP 001	Minn. R. 7011.0070, subp. 3, 7011.0080	Hood Certification and Evaluation

The language 'This is a state-only requirement and is not enforceable by the U.S. Environmental Protection Agency (EPA) Administrator and citizens under the Clean Air Act' refers 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 that are required by state law. State law requirements are not enforceable by 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

3.1 Calculations of Potential to Emit

Attachment No. 1 to this TSD contains detailed spreadsheets and supporting information prepared by the MPCA and the Permittee, which summarize the PTE of the Facility. Emissions calculations are primarily based on emission factors taken from AP-42, Section 11.12, "Concrete Batching", 10/01. Emissions from the aggregate dryer are based on stack tests conducted on 10/29/2003. Fugitive emissions have been calculated but are not need included in total facility PTE since the facility is not one of the types of facilities that must include fugitive emissions in the calculation of PTE.

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
Facility	Minn. R. 7011.0854, subp. 3	Observe visible emissions at the outlet of each piece of control equipment during the receiving of cementitious material	State standard for concrete manufacturing plants. Corrective action required if any visible emissions are present
GP001, GP 003	Minn. R. 7011.0080	Pressure drop across baghouses, once every 24-hours of operation	Greater than or equal to 1.0 inches of water column and less than or equal to 6.0 inches of water column. Corrective action required if pressure drop is out of range.
GP001, GP 003	Minn. R. 7011.0080	Visible emissions from each baghouse stack, once each day of operation during daylight hours	Corrective action required if any visible emissions present.
GP 002	Minn. R. 7011.0715 (Opacity and variable PM limit applicable to each emission unit)	None	Emission units are controlled by baghouses. Periodic monitoring is required for baghouses; this is considered sufficient for monitoring. The PTE for the emission units is less than allowed by rule, so it is not considered likely that they would violate the applicable requirement.

3.3 Insignificant Activities

Twin City Concrete Products Co. has several operations which are classified as insignificant activities. These are listed in Appendix B to the permit.

The insignificant activities at this facility are only subject to general applicable requirements. For these units, based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement.

Permit Organization

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. The only item that deviates from guidance is the listing of certain applicable requirements at the group level even though they apply at the individual unit. For example: the Industrial Process Equipment Rule (IPER) is listed at GP 002. In general, limits that apply to individual pieces of equipment should be tracked at the 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.

3.4 Hood Certification and Evaluation

The facility is required to certify the proper operation of all dust control systems utilizing a capture hood according to Minn. R. 7011.0070. This requirement also requires recordkeeping to ensure continuing proper operation of the control system. At the time of the application submittal, hood certifications were completed for the following emission units: EU 003, 016, 018, 028, 029, 030, 031, 034, 035, 036, 040, 041, 042, 043, 044, and 053. Certifications had not yet been performed on the following emission units: EU 064, EU 065, and EU 066. Therefore, the permittee is required to perform hood certification within 60 days of permit issuance.

3.5 EU 001 Natural Gas Dryer

The permittee submitted an application for a minor permit amendment in February 1995 for installation of an aggregate dryer controlled by a baghouse. A performance test for PM and PM_{10} was conducted in October 2003. The results showed that the emissions were larger than would have been expected, and greater than allowed by Minn. R. 7011.0610. The results also indicate that installation of the emission unit would not have qualified as a minor amendment. However, the tested emission results are higher than would normally be expected from an emission unit controlled by a baghouse. It seems likely that there may have been repairs needed for the baghouse. This permit requires that the emission unit be tested within 60 days of permit issuance, and after any repairs have been made to the baghouse. The testing is considered the corrective action for this noncompliance.

3.6 Dispersion Modeling

A large group of facilities were modeled, using a screen level analysis, for compliance with National Ambient Air Quality Standards (NAAQS) as part of the Capped Emissions Permit rulemaking. The resulting data indicated the need for a closer look at approximately 140 sources, including Twin City Concrete. Additional screening modeling was done by the MPCA for Twin City Concrete, using site specific information such as stack heights and emission rates. This additional screening modeling continued to indicate that there may not be compliance with the NAAQS for PM_{10} for the Twin City Concrete facility. The permittee is required to submit a modeling protocol, and then conduct the modeling, after permit issuance to resolve this issue. The facility will have to demonstrate compliance with the NAAQS.

3.7 Comments Received

Public Notice Period: March 8, 2005 – April 6, 2005
EPA 45-day Review Period: March 8, 2005 – April 22, 2005

A letter from a neighborhood group was received during the public notice period. A letter from a planning council which represents the neighborhood was received after the public notice period. Neither letter included adverse comments on any applicable requirements of the permit. Copies of these letters and the MPCA response letters are attached to this document. Changes to the permit were not made as a result of the comments.

Comments were not received from EPA during their review period. Changes to the permit were not made.

4. Conclusion

Based on the information provided by Twin City Concrete Products Co., the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 12300288-01, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Jonathan Amos, P.E., EarthTech
Paula Connell, P.E., MPCA
Toni Volkmeier, peer review, MPCA
Robert Berg, enforcement, MPCA

Attachments:
1. PTE Summary Calculation Spreadsheets
2. Facility Description (GI-05A and GI-05B) and CD-01 Forms
3. Comment letters and responses