

AIR EMISSION PERMIT NO. 11900001-003
Major Amendment

IS ISSUED TO

American Crystal Sugar Company

AMERICAN CRYSTAL SUGAR - CROOKSTON
Highway 75 South
Crookston, Polk County, MN 56716

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	Issue Date	Action
Total Facility Operating Permit	January 13, 1995	June 26, 2001	001
Major Amendment	January 23, 2003	July 1, 2003	002
Major Amendment	June 20, 2008	See Below	003

This permit supersedes permit 11900001-002 and authorizes the Permittee to operate and modify 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/Major for NSR

Major Amendment

Issue Date: June 6, 2006

Issue Date: March 5, 2009

Expiration: June 26, 2006*

Title I Conditions do not expire.

* The Permittee can continue to operate this facility after the expiration date of this permit per the provision under Minn. R. 7007.0405, subp. 3 (Title V Re-issuance application received on December 22, 2005)

Don Smith, P.E., Manager
Air Quality Permits Section
Industrial Division

for Paul Eger
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:

American Crystal Sugar's Crookston plant consists of three coal-fired (subbituminous) boilers (each equipped with an Electrostatic Precipitator (ESP)); two natural gas-fired pulp dryers equipped with fabric filters and cyclones; one pulp pellet cooler; pulp pellet handling, storage and loading equipment; one lime kiln (calciner); one lime slaker; one sugar dryer; one sugar cooler; ash removal systems; and dry sugar storage, handling, and sacking equipment. The Crookston plant operates from late August through May of each year, 24 hours per day. The plant typically starts up two to three days before starting to slice sugar beets and shuts down two to four days after beet slicing has stopped.

PERMIT ACTION 003 (MAJOR AMENDMENT):

This permit amendment allows the combustion of anthracite coal, pulverized coal and natural gas at the existing lime kiln (EU 005). The lime kiln previously was permitted to burn coke as the primary fuel. The additional fuel types allowed for the existing lime kiln does not result in significant emission increases from this unit. Since the requirements of NESHAP, Subpart DDDDD have been vacated, MPCA has added the CAA 112 (j) (MACT) submittal requirements to the amended permit.

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston
 Permit Number: 11900001 - 003

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

Subject Item:	Total Facility
What to do	Why to do it
EMISSION AND OPERATIONAL REQUIREMENTS	hdr
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010 - 7009.0080
Hydrogen Sulfide: less than or equal to 0.050 parts per million as a half hour average not to be exceeded more than twice per year in the ambient air around the facility. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7009.0080
Hydrogen Sulfide: less than or equal to 0.030 parts per million as a half hour average not to be exceeded more than twice in any five consecutive days in the ambient air around the facility. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7009.0080
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 16(J)
Operation and Maintenance (O&M) Plan: Retain at the stationary source an O&M plan for all air pollution control equipment. At a minimum, the O&M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subps. 14 & 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
Federal Performance Standards: Opacity standards apply at all times except during periods of start-up, shutdown, and malfunction, and as otherwise provided in an applicable requirement or compliance document.	40 CFR Section 60.11(c)
State Performance Standards: Opacity standards apply at all times except during periods of start-up, shutdown, and malfunction, and as otherwise provided in an applicable requirement or compliance document. The exemption for periods of start-up, shutdown, and malfunction only applies if the conditions of Minn. R. 7011.0010, subp. 4(A), (B), and (C) are met.	Minn. R. 7011.0010, subp. 4
PERFORMANCE TESTING	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017.	Minn. R. ch. 7017
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Table A of the permit. 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 - CD 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. R. 7017.2018; Minn. R. 7017.2030, subps. 1-4; Minn. R. 7017.2035, subps. 1-2
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change.	Minn. R. 7017.2025, subp. 3
MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment.	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: 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)
Hydrogen Sulfide Ambient Monitoring: The Permittee shall continue to operate a hydrogen sulfide monitoring network in accordance with the plan approved by the MPCA to measure the ambient concentration of hydrogen sulfide during the warm weather months (April through October). The Permittee may make a written request to the North District Manager to cease operation of the network at any time. An analysis of the ambient H2S data collected to date shall accompany this request. This is a state only requirement and is not enforceable by the EPA Administrator citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 4
MODELING REQUIREMENTS	hdr
Parameters Used in Modeling: The stack heights, emission rates, and other parameters used in the modeling for this major PSD modification are listed in Appendix A of this permit. The Permittee must submit to the Commissioner for approval any revisions of these parameters and must wait for a written approval before making such changes. The information submitted must include, at a minimum, the locations, heights and diameters of the stacks, locations and dimensions of nearby buildings, the velocity and temperatures of the gases emitted, and the emission rates. The plume dispersion characteristics due to the revisions of the information must be equivalent to or better than the dispersion characteristics modeled in the application for this permit as approved in a memo from Margaret McCourtney and Dennis Becker to Tom Holstrom, dated January 28, 1999. The Permittee shall demonstrate this equivalency in the proposal.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
If the information does not demonstrate equivalent or better dispersion characteristics, or if a conclusion cannot readily be made about the dispersion, the Permittee must remodel. For changes that do not require a permit amendment or require a minor permit amendment, the proposal must be submitted as soon as practicable, but no less than 60 days before beginning actual construction of the stack or associated emission unit. For changes that require a permit amendment other than a minor amendment, the proposal must be submitted with the permit application.	(continued) Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
RECORDKEEPING	hdr
Recordkeeping: Retain all records required by this permit 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 strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. These records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the office of the stationary source for all other years. The records may be maintained in either electronic or paper format.	Minn. R. 7007.1200, subp. 4
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. 7007.1150-7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 - 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 - 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 - 7002.0095
Inapplicable Requirements: at the time of the issuance of this permit the Permittee did not contain any affected facilities under 40 CFR Section 60, subps: D, Db, Dc, Hh, or Kb. At the time of the issuance of this permit EU 001, EU 002, and EU 003 are existing facilities with respect to 40 CFR Section 60, subp Db and EU 004 is an existing facility with respect to 40 CFR Section 60, subp Dc. The Permittee is not subject to 40 CFR Section 61.	40 CFR Part 60; 40 CFR Part 61; Minn. R. 7007.1800

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

<p>The Permittee shall submit a Part 1 MACT application within 30 days of startup of any 112(j) affected source. The application shall meet the requirements of 40 CFR Section 63.53(a).</p> <p>The Permittee shall submit a Part 2 MACT application within 90 days of startup of any 112(j) affected source. The application shall meet the requirements of 40 CFR Section 63.53(b).</p> <p>112(j) affected source is defined in 40 CFR Section 63.51. As of permit issuance, 112(j) affected sources include industrial, commercial, and institutional boilers and process heaters; brick and structural clay products manufacturing; clay ceramics manufacturing.</p>	<p>40 CFR Sections 63.52(b)(1) & (e)(1)</p>
<p>DETERMINING IF A PROJECT/MODIFICATION IS SUBJECT TO NSR</p>	<p>hdr</p>
<p>These requirements apply where there is a reasonable possibility that a proposed project, analyzed using the actual-to-projected-actual (ATPA) test and found to not be part of a major modification, may result in a significant emissions increase. If the ATPA test is not used for a particular project, or if there is not a reasonable possibility that the proposed project could result in a significant emissions increase, then these requirements do not apply to that project.</p> <p>Even though a particular modification is not subject to New Source Review (NSR), a permit amendment, recordkeeping, or notification may still be required under Minn. R. 7007.1150 - 7007.1500.</p>	<p>Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000</p>
<p>Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee shall document the following information:</p> <ol style="list-style-type: none"> 1. A description of the project; 2. Identification of the emission unit(s) whose emissions of an NSR pollutant could be affected; and 3. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the potential emissions, the projected actual emissions, the amount of emissions excluded due to increases not associated with the modification and that the unit(s) could have accommodated during the baseline period, an explanation of why the amounts were excluded, and any creditable contemporaneous increases and decreases that were considered in the determination. <p>The Permittee shall maintain records of this documentation.</p>	<p>Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5</p>
<p>The Permittee shall monitor the actual emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using the ATPA test, and the potential emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using potential emissions. The Permittee shall calculate and maintain a record of the sum of the actual and potential (if used in the analysis) emissions of the regulated pollutant, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit of any unit associated with the project.</p>	<p>Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5</p>
<p>The Permittee must submit a report to the Agency if the annual summed (actual plus potential, if applicable) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR Section 52.21(b)(23). Such report shall be submitted to the Agency within 60 days after the end of the year in which the exceedances occur, and shall contain:</p> <ol style="list-style-type: none"> 1. The name and ID number of the facility, and the name and telephone number of the facility contact person; 2. The annual emissions (actual plus potential, if any part of the project was analyzed using potential emissions) for each pollutant for which the preconstruction projection and significant emissions increase are exceeded; and 3. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection. 	<p>Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-5

03/05/09

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: GP 001 Boilers #1, #2, and #3**Associated Items:** EU 001 Boiler #1

EU 002 Boiler #2

EU 003 Boiler #3

What to do	Why to do it
Fuel Usage: less than or equal to 15,000 gallons/year using 12-month Rolling Sum of on-site generated used oil/used oil sorbents. 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
Fuel Usage Recordkeeping: The Permittee shall calculate the 12-month rolling sum by the 15 day of each month for the previous month. The Permittee shall keep records of the amount of used oil and used oil sorbents combusted in the boilers every month and the 12-month rolling sum calculation on site. 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. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 001 Boiler #1

Associated Items: CE 001 Electrostatic Precipitator - High Efficiency

GP 001 Boilers #1, #2, and #3

SV 001

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 15.0 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 15.0 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 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. 7011.0510, subp. 2
Sulfur Dioxide: less than or equal to 127 lbs/hour (0.93 lb/MMBtu). The long term emission rate of 0.93 lb/MMBtu is equivalent to a short-term (1- to 3-hour) emission rate of 1.23 lb/MMBtu, based on the coal sulfur analysis methodology contained in this permit.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0510, subp. 1
Sulfur Content of Fuel: less than or equal to 0.50 percent by weight for subbituminous coal as received.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 99.8 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Fuels Allowed: Subbituminous coal, on-site generated used oil, and used oil sorbents.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Boiler Pollution Control Equipment Requirement: The Permittee shall operate the electrostatic precipitator (CE 001) on EU 001 with no less than 3 fields online. This limit may be amended as specified in Minn. R. 7017.2025 upon completion of each subsequent performance test.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 14; Minn. R. 7017.2025, subp. 3
Operation and Maintenance: The Permittee shall operate and maintain CE 001 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 36 months starting 10/31/2008 to measure particulate matter, particulate matter < 10 microns, sulfur dioxide, and nitrogen oxides at intervals not to exceed 36 months.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months starting 10/31/2008 to measure opacity at intervals not to exceed 36 months.	Minn. R. 7017.2020, subp. 1
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Boiler Pollution Control Equipment Monitoring/Recordkeeping: The Permittee shall record the minimum number of fields online once each day during operation. If the required number of fields are found not to be online, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to return the required number of fields online. Make a record of all corrective actions taken.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14
<p>Fuel Sulfur Content: The Permittee shall determine the sulfur content of each delivery of coal by either of the following methods:</p> <ol style="list-style-type: none"> 1. Obtain from the fuel supplier, for each shipment of fuel delivered, a signed certification of the sulfur content of the fuel, or 2. According to the current ASTM sampling and analysis methods. <p>With either method, the weight represented by each sulfur content analysis shall be less than or equal to five train cars. Maintain these records for a minimum of five years from the date the information was obtained.</p>	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 002 Boiler #2

Associated Items: CE 002 Electrostatic Precipitator - High Efficiency

GP 001 Boilers #1, #2, and #3

SV 002

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 15.0 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 15.0 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 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. 7011.0510, subp. 2
Sulfur Dioxide: less than or equal to 127 lbs/hour (0.93 lb/MMBtu). The long term emission rate of 0.93 lb/MMBtu is equivalent to a short-term (1- to 3-hour) emission rate of 1.23 lb/MMBtu, based on the coal sulfur analysis methodology contained in this permit.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0510, subp. 1
Sulfur Content of Fuel: less than or equal to 0.50 percent by weight for subbituminous coal as received.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 99.8 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Fuels Allowed: Subbituminous coal, on-site generated used oil, and used oil sorbents.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Boiler Pollution Control Equipment Requirement: The Permittee shall operate the electrostatic precipitator (CE 002) on EU 002 with no less than 3 fields online. This limit may be amended as specified in Minn. R. 7017.2025 upon completion of each subsequent performance test.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 14; Minn. R. 7017.2025, subp. 3
Operation and Maintenance: The Permittee shall operate and maintain CE 002 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 36 months starting 10/31/2008 to measure particulate matter, particulate matter < 10 microns, sulfur dioxide, and nitrogen oxides at intervals not to exceed 36 months.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months starting 10/31/2008 to measure opacity at intervals not to exceed 36 months.	Minn. R. 7017.2020, subp. 1
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Boiler Pollution Control Equipment Monitoring/Recordkeeping: The Permittee shall record the minimum number of fields online once each day during operation. If the required number of fields are found not to be online, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to return the required number of fields online. Make a record of all corrective actions taken.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14
<p>Fuel Sulfur Content: The Permittee shall determine the sulfur content of each delivery of coal by either of the following methods:</p> <ol style="list-style-type: none"> 1. Obtain from the fuel supplier, for each shipment of fuel delivered, a signed certification of the sulfur content of the fuel, or 2. According to the current ASTM sampling and analysis methods. <p>With either method, the weight represented by each sulfur content analysis shall be less than or equal to five train cars. Maintain these records for a minimum of five years from the date the information was obtained.</p>	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 003 Boiler #3

Associated Items: CE 003 Electrostatic Precipitator - High Efficiency

GP 001 Boilers #1, #2, and #3

SV 003

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 15.0 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 15.0 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 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. 7011.0510, subp. 2
Sulfur Dioxide: less than or equal to 154 lbs/hour (0.93 lb/MMBtu). The long term emission rate of 0.93 lb/MMBtu is equivalent to a short-term (1- to 3-hour) emission rate of 1.23 lb/MMBtu, based on the coal sulfur analysis methodology contained in this permit.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0510, subp. 1
Sulfur Content of Fuel: less than or equal to 0.50 percent by weight for subbituminous coal as received.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 120.2 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Steam Flow: less than or equal to 120,340 lbs/hour using 8-hour Block Average . This limit may be amended as specified in Minn. R. 7017.2025 upon completion of each subsequent performance test. Divide the total weight by the total operating time in each eight-hour block.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7017.2025, subp. 3
Fuels Allowed: Subbituminous coal, on-site generated used oil, and used oil sorbents.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Boiler Pollution Control Equipment Requirement: The Permittee shall operate the electrostatic precipitator (CE 003) on EU 003 with no less than 3 fields online. This limit may be amended as specified in Minn. R. 7017.2025 upon completion of each subsequent performance test.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 14; Minn. R. 7017.2025, subp. 3
Operation and Maintenance: The Permittee shall operate and maintain CE 003 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 36 months starting 10/31/2008 to measure particulate matter, particulate matter < 10 microns, sulfur dioxide, and nitrogen oxides at intervals not to exceed 36 months.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months starting 10/31/2008 to measure opacity at intervals not to exceed 36 months.	Minn. R. 7017.2020, subp. 1
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Boiler Pollution Control Equipment Monitoring/Recordkeeping: The Permittee shall record the minimum number of fields online once each day during operation. If the required number of fields are found not to be online, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to return the required number of fields online. Make a record of all corrective actions taken.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14
<p>Fuel Sulfur Content: The Permittee shall determine the sulfur content of each delivery of coal by either of the following methods:</p> <ol style="list-style-type: none"> 1. Obtain from the fuel supplier, for each shipment of fuel delivered, a signed certification of the sulfur content of the fuel, or 2. According to the current ASTM sampling and analysis methods. <p>With either method, the weight represented by each sulfur content analysis shall be less than or equal to five train cars. Maintain these records for a minimum of five years from the date the information was obtained.</p>	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 005 Lime Kiln

Associated Items: CE 004 Wet Scrubber-High Efficiency w/o Lime

CE 026 Carbonation System

SV 005 Process Bypass

SV 029 Carbonation Vent

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 2.0 lbs/hour during normal operation and start-up (bypass) for SV 005.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 2.0 lbs/hour during normal operation and start-up (bypass) for SV 005.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 5.0 lbs/hour during normal operation for SV 005.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 40.0 lbs/hour during start-up (bypass).	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 19.6 lbs/hour during normal operation and start-up (bypass).	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent requirement 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)
Sulfur Dioxide: less than or equal to 4.0 lbs/million Btu heat input	Minn. R. 7011.0610, subp. 2(B)
Sulfur Content of Fuel: less than or equal to 0.80 percent by weight for coke as received.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Sulfur Content of Fuel: less than or equal to 0.50 percent by weight for pulverized coal.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Fuels Allowed: Industrial oven coke (coal coke), anthracite coal, pulverized coal, and natural gas. Propane and wood can also be used as fuel for initiating combustion of the solid fuels.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Pressure Drop: greater than or equal to 25 inches of water column	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 4
Water flow rate: greater than or equal to 63 gallons/minute	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7017.2025, subp. 3
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 36 months starting 10/31/2008 to measure particulate matter, particulate matter < 10 microns, sulfur dioxide, and nitrogen oxides at intervals not to exceed 36 months.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months starting 10/31/2008 to measure opacity at intervals not to exceed 36 months.	Minn. R. 7017.2020, subp. 1
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Monitoring of Pollution Control Equipment: The Permittee shall monitor and record the scrubber liquid flow rate and the gas pressure drop across the scrubber once each operating day. If any of the monitored parameters are found to be outside the ranges in this permit, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to restore the parameter(s) to the proper range. Make a record of all corrective actions taken.	Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

<p>Fuel Sulfur Content: The Permittee shall determine the sulfur content of each delivery of coal by either of the following methods:</p> <ol style="list-style-type: none">1. Obtain from the fuel supplier, for each shipment of fuel delivered, a signed certification of the sulfur content of the fuel, or2. According to the current ASTM sampling and analysis methods. <p>With either method, the weight represented by each sulfur content analysis shall be less than or equal to five train cars. Maintain these records for a minimum of five years from the date the information was obtained.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5</p>
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TABLE A: LIMITS AND OTHER REQUIREMENTS

A-11

03/05/09

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 006 Lime Slaker**Associated Items:** CE 005 Wet Scrubber-High Efficiency w/o Lime
SV 006

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 0.20 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.20 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Pressure Drop: greater than or equal to 5 inches of water column and less than or equal to 15 inches of water column	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 4
Water flow rate: greater than or equal to 20 gallons/minute	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 4
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Monitoring of Pollution Control Equipment: The Permittee shall monitor and record the scrubber liquid flow rate and the gas pressure drop across the scrubber once each operating day. If any of the monitored parameters are found to be outside the ranges in this permit, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to restore the parameter(s) to the proper range. Make a record of all corrective actions taken.	Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 008 Sugar Dryer

Associated Items: CE 006 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
SV 008

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 0.81 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.81 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
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. 7011.0710, subp. 1(B)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 5.0 inches of water column	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 4
Operation and Maintenance: The Permittee shall operate and maintain CE 006 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 12/06/2007 to measure particulate matter and particulate matter < 10 microns at intervals not to exceed 60 months.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Monitoring of Pollution Control Equipment: The Permittee shall monitor and record the scrubber liquid flow rate and the gas pressure drop across the scrubber once each operating day. If any of the monitored parameters are found to be outside the ranges in this permit, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to restore the parameter(s) to the proper range. Make a record of all corrective actions taken.	Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 009 Sugar Cooler

Associated Items: CE 007 Wet Scrubber-High Efficiency w/o Lime
SV 009

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 4.29 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 4.29 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Pressure Drop: greater than or equal to 3.5 inches of water column	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 4
Water flow rate: greater than or equal to 280 gallons/minute	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 4
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 03/25/2008 to measure particulate matter and particulate matter < 10 microns at intervals not to exceed 60 months.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Monitoring of Pollution Control Equipment: The Permittee shall monitor and record the scrubber liquid flow rate and the gas pressure drop across the scrubber once each operating day. If any of the monitored parameters are found to be outside the ranges in this permit, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to restore the parameter(s) to the proper range. Make a record of all corrective actions taken.	Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 010 Sugar Storage Conveyor System

Associated Items: CE 008 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
SV 010

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 2.57 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 2.57 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Operation and Maintenance: The Permittee shall operate and maintain CE 008 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
<p>Monitoring of Pollution Control Equipment: The Permittee shall perform a visible emission check once each operating day (during daylight hours). A visible emission check shall consist of viewing the exhaust gas exiting the baghouse stack and recording whether visible emissions are present or not.</p> <p>If visible emissions are present, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to eliminate the visible emissions. Make a record of all visible emission observations and any corrective actions taken.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 011 Sugar Silo Dust Control System

- Associated Items:** 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 011 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
 SV 011
 SV 012
 SV 013
 SV 014
 SV 015
 SV 016

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 1.71 lbs/hour (this limit applies to each stack listed under Associated Items)	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 1.71 lbs/hour (this limit applies to each stack listed under Associated Items)	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. This limit applies to each stack listed under Associated Items.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity (this limit applies to each stack listed under Associated Items).	Minn. R. 7011.0715, subp. 1(B)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Operation and Maintenance: The Permittee shall operate and maintain the associated control equipment (CE 009 - CE 014) according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Monitoring of Pollution Control Equipment: The Permittee shall perform a visible emission check once each operating day (during daylight hours). A visible emission check shall consist of viewing the exhaust gas exiting the baghouse stack and recording whether visible emissions are present or not. If visible emissions are present, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to eliminate the visible emissions. Make a record of all visible emission observations and any corrective actions taken.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-16

03/05/09

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 012 Weibull Bin Dust Control System**Associated Items:** CE 015 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 017

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 0.21 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.21 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Operation and Maintenance: The Permittee shall operate and maintain CE 015 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
<p>Monitoring of Pollution Control Equipment: The Permittee shall perform a visible emission check once each operating day (during daylight hours). A visible emission check shall consist of viewing the exhaust gas exiting the baghouse stack and recording whether visible emissions are present or not.</p> <p>If visible emissions are present, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to eliminate the visible emissions. Make a record of all visible emission observations and any corrective actions taken.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 014 South Pulp Dryer

Associated Items: CE 017 Fabric Filter - Medium Temperature i.e., 180 F<T<250 F

CE 027 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

SV 019

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 23.6 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 23.6 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet 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)
Fuels Allowed: natural gas only	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Pressure Drop: greater than or equal to 3 inches of water column and less than or equal to 7 inches of water column for the multiclone	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 6 inches of water column for the baghouse	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
Operation and Maintenance: The Permittee shall operate and maintain CE 017 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 12/06/2007 to measure particulate matter and particulate matter < 10 microns at intervals not to exceed 60 months.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Monitoring of Pollution Control Equipment: The Permittee shall monitor and record the pressure drop across the multiclone and the baghouse once each operating day. If any of the monitored parameters are found to be outside the ranges in this permit, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to restore the parameter(s) to the proper range. Make a record of all corrective actions taken.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 015 North Pulp Dryer

Associated Items: CE 018 Fabric Filter - Medium Temperature i.e., 180 F<T<250 F

CE 028 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

SV 020

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 26.5 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 26.5 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet 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)
Fuels Allowed: natural gas only	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Pressure Drop: greater than or equal to 3 inches of water column and less than or equal to 7 inches of water column for the multiclone	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 6 inches of water column for the baghouse	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
Operation and Maintenance: The Permittee shall operate and maintain CE 018 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 12/06/2007 to measure particulate matter and particulate matter < 10 microns at intervals not to exceed 60 months.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Monitoring of Pollution Control Equipment: The Permittee shall monitor and record the pressure drop across the multiclone and the baghouse once each operating day. If any of the monitored parameters are found to be outside the ranges in this permit, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to restore the parameter(s) to the proper range. Make a record of all corrective actions taken.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 016 Pulp Pellet Cooler

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

SV 021

SV 022

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 0.5 lbs/hour (this limit applies individually to each stack listed above under Associated Items).	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.5 lbs/hour (this limit applies individually to each stack listed above under Associated Items).	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735 (this limit applies individually to each stack listed above under Associated Items).	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity (this limit applies individually to each stack listed above under Associated Items).	Minn. R. 7011.0715, subp. 1(B)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 6 inches of water column	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
Operation and Maintenance: The Permittee shall operate and maintain CE 019 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 36 months starting 11/15/2007 to measure particulate matter and particulate matter < 10 microns at intervals not to exceed 36 months.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months starting 11/15/2007 to measure opacity at intervals not to exceed 36 months.	Minn. R. 7017.2020, subp. 1
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Monitoring of Pollution Control Equipment: The Permittee shall monitor and record the pressure drop across the multiclone and the baghouse once each operating day. If any of the monitored parameters are found to be outside the ranges in this permit, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to restore the parameter(s) to the proper range. Make a record of all corrective actions taken.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 017 Pulp Bagging/Conveying

Associated Items: CE 029 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 030 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 030

What to do	Why to do it
EMISSION LIMITS	hdr
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 6 inches of water column	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
Operation and Maintenance: The Permittee shall operate and maintain CE 029 & CE 030 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Monitoring of Pollution Control Equipment: The Permittee shall monitor and record the pressure drop across each baghouse once each operating day. If the monitored parameter is found to be outside the range in this permit, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to restore the parameter(s) to the proper range. Make a record of all corrective actions taken.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-21

03/05/09

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 020 Sugar Screening Dust Control System**Associated Items:** CE 022 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 025

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 2.40 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 2.40 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Operation and Maintenance: The Permittee shall operate and maintain CE 022 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
<p>Monitoring of Pollution Control Equipment: The Permittee shall perform a visible emission check once each operating day (during daylight hours). A visible emission check shall consist of viewing the exhaust gas exiting the baghouse stack and recording whether visible emissions are present or not.</p> <p>If visible emissions are present, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to eliminate the visible emissions. Make a record of all visible emission observations and any corrective actions taken.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-22

03/05/09

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 021 Central Vacuming System**Associated Items:** CE 023 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 026

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 0.26 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.26 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Operation and Maintenance: The Permittee shall operate and maintain CE 023 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Monitoring of Pollution Control Equipment: The Permittee shall perform a visible emission check once each operating day (during daylight hours). A visible emission check shall consist of viewing the exhaust gas exiting the baghouse stack and recording whether visible emissions are present or not. If visible emissions are present, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to eliminate the visible emissions. Make a record of all visible emission observations and any corrective actions taken.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 022 Remelt Tank Dust Control System

Associated Items: CE 024 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 027

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 0.60 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.60 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Operation and Maintenance: The Permittee shall operate and maintain CE 024 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
<p>Monitoring of Pollution Control Equipment: The Permittee shall perform a visible emission check once each operating day (during daylight hours). A visible emission check shall consist of viewing the exhaust gas exiting the baghouse stack and recording whether visible emissions are present or not.</p> <p>If visible emissions are present, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to eliminate the visible emissions. Make a record of all visible emission observations and any corrective actions taken.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: EU 023 Pulp Pellet Loadout (Rail Car Hatch Adapter)

Associated Items: CE 025 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
SV 028

What to do	Why to do it
EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 1.37 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 1.37 lbs/hour	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
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 meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
The Permittee shall clean up commodities spilled on the driveway and other facility property as required to minimize fugitive emissions to a level consistent with RACT (Reasonably Available Control Technology).	Minn. R. 7011.1005, subp. 1(A)
Opacity: less than or equal to 10 percent opacity from truck loading at EU 023.	Minn. R. 7011.1005, subp. 3(B)
Opacity: less than or equal to 5 percent opacity from truck unloading stations, railcar unloading stations, railcar loading stations, and handling operation fugitive emissions.	Minn. R. 7011.1005, subp. 3(A)
Opacity: less than or equal to 10 percent opacity for emissions vented through SV 028.	Minn. R. 7011.1005, subp. 3(D)
Total Particulate Matter: greater than or equal to 80 percent collection efficiency	Minn. R. 7011.1005, subp. 3(E)
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Operation and Maintenance: The Permittee shall operate and maintain CE 025 according to the manufacturer's specifications and the facility O&M plan.	Minn. R. 7007.0800, subp. 14
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
<p>Monitoring of Pollution Control Equipment: The Permittee shall perform a visible emission check once each operating day (during daylight hours). A visible emission check shall consist of viewing the exhaust gas exiting the baghouse stack and recording whether visible emissions are present or not.</p> <p>If visible emissions are present, take corrective action (as outlined in the O&M plan for the facility) within 24-hours of discovery to eliminate the visible emissions. Make a record of all visible emission observations and any corrective actions taken.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4, 5, & 14</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-25

03/05/09

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: FS 001 Vehicle Traffic - Paved Roads

What to do	Why to do it
Control Operations: greater than or equal to 8 control operations per day during the beet delivery period (about September 1 through October 31). Control operations include vacuum sweeping, water flushing, or broom sweeping and flushing.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Recordkeeping: once each day during the beet delivery period (about September 1 through October 31) the Permittee shall make a record of the total number of control operations.	Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-26

03/05/09

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: FS 005 Spent Lime Handling & Storage

What to do	Why to do it
Spent Lime Operations: no inactive spent lime disposal cover operations may occur during the beet delivery period (about September 1 through October 31). Disposal operations of lime waste generated during this period are allowed.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Recordkeeping: during the beet delivery period (about September 1 through October 31), the Permittee shall make a record of all stockpile operations as they occur.	Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-27

03/05/09

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

Subject Item: FS 006 Vehicle Traffic - Unpaved Roads

What to do	Why to do it
Watering Operations: greater than or equal to 1 per day during non-freezing weather. Watering is not necessary during days that measurable rain (0.01 inch) is received.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Recordkeeping: once each day record the total number of watering operations.	Minn. R. 7007.0800, subps. 4, 5, & 14

TABLE B: SUBMITTALS

B-1 03/05/09

Facility Name: American Crystal Sugar - Crookston
Permit Number: 11900001 - 003

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.

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 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 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

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

B-2 03/05/09

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility

TABLE B: RECURRENT SUBMITTALS

B-3 03/05/09

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 003

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 06/26/2001. 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 starting 06/26/2001 . To be submitted to the Commissioner on a form approved by the Commissioner. The report covers all deviations experienced during the calendar year. A copy of this report shall also be submitted to the U.S. EPA Regional Office.	Total Facility

APPENDIX A

Parameters Used in Modeling

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001-003

These modeling parameters were approved in a memo from Margaret McCourtney and Dennis Becker to Tom Holstrom, dated January 28, 1999. Revised SO₂ modeling was submitted in a letter from Greg Raetz to Trent Wickman dated September 8 and 15, 1999.

TABLE 1 - Modeled Emission Rates (lb/hr)

Stack #	PM ₁₀	SO ₂	NO _x	CO
001*	15.0	127.5, 168.5	99.8	36.4
002*	15.0	127.5, 168.5	99.8	36.4
003*	15.0	153.6, 203.0	120.2	43.9
004	0.16	0.01	1.60	0.4
005 (lime kiln)*	2.00	5.0, 40.0	19.6	14.0
005 (carbonation vent)*	0.33	2.37, 0	18.6	13.3
006	0.20	-	-	-
007	-	-	-	-
008	0.81	-	-	-
009	4.29	-	-	-
010	2.57	-	-	-
011	1.71	-	-	-
012	1.71	-	-	-
013	-	-	-	-
014	-	-	-	-
015	-	-	-	-
016	-	-	-	-
017	0.21	-	-	-
018	1.37	-	-	-
019	23.6	0.043	10.1	2.53
020	26.5	0.043	10.1	2.53
021	0.50	-	-	-
022	0.50	-	-	-
025	2.40	-	-	-
026	0.26	-	-	-
027	0.60	-	-	-
028	1.37	-	-	-
paved traffic**	8.87, 15.0, 9.24	-	-	-
unpaved traffic**	3.22, 0.06, 6.01	-	-	-

* values for SO₂ represent: long term average, short term average

** values represent: long term average, short term average during the beet haul period (September 1 through October 31), short term average during the non-beet haul period

TABLE 2 - Modeled Stack Parameters

Stack #	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)	Orientation
001	150.0	5.57	81,300	380	Vertical
002	150.0	5.57	79,200	370	Vertical
003	150.0	5.57	73,500	400	Vertical
004	90.1	2.33	4,969	358	Vertical
005 (lime kiln)	102.0	2.0	225 (4,500)	120	Vertical
005 (carbonation vent)	65.5	2.5	4,275	70	Vertical
006	44.8	3.0	14,300	120	Vertical
007	-	-	-	-	-
008	88.4	2.0	12,000	170	Vertical
009	91.12	3.3	30,000	120	Vertical
010	91.25	1.33	15,000	70	Vertical
011	112.33	1.83	10,000	70	Horizontal
012	112.33	1.83	10,000	70	Horizontal
013	112.33	1.83	10,000	70	Horizontal
014	112.33	1.83	10,000	70	Horizontal
015	112.33	1.83	10,000	70	Horizontal
016	112.33	1.83	10,000	70	Horizontal
017	9.5	0.67	1,200	70	Horizontal
018	37.1	0.67	8,000	70	Horizontal
019	140.0	4.0	85,000	240	Vertical
020	140.0	5.0	120,000	240	Vertical
021	51.1	1.97	7,750	140	Vertical
022	51.6	1.47	7,750	140	Vertical
025	38.0	1.33	2.75	70	Horizontal
026	38.0	1.33	2.75	70	Horizontal
027	38.0	1.33	2.75	70	Horizontal
028	17.5	1.5	200	70	Vertical

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 1190001-003

This technical support document is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp. 1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the determination to issue the permit.

1. General Information

1.1 Applicant and Stationary Source Location

Applicant/Address	Stationary Source/Address (SIC Code: 2063)
American Crystal Sugar - Crookston 101 North 3rd Street, Moorhead, MN 56560	Highway 75 South Crookston, Polk County, MN 56716
Contact: Annette Cederberg	Phone: 218-236-4304

1.2 Description of the Facility

American Crystal Sugar's Crookston plant consists of three coal-fired (subbituminous) boilers, each with an Electrostatic Precipitator (ESP); two natural gas-fired pulp dryers each with a fabric filter and cyclones; one pulp pellet cooler; pulp pellet handling, storage and loading equipment; one lime kiln (calciner); one lime slaker; one sugar dryer; one sugar cooler; ash removal systems; and dry sugar storage, handling, and sacking equipment. The Crookston plant operates from late August through May of each year, 24 hours per day. The plant typically starts up two to three days before starting to slice sugar beets and shuts down two to four days after beet slicing has stopped.

1.3 Description of the Activities Allowed by this Permit Action

This permit action is a major amendment to allow the use of additional fuels in the lime kiln. The primary fuel combusted for the existing lime kiln (EU 005) at this plant was industrial oven coke (coal coke). Due to the low supply of coke, American Crystal Sugar requested permission to combust anthracite coal, pulverized coal and natural gas in the existing lime kiln.

This facility is an existing major source for HAP and NESHAPs. Since the NESHAP Subpart DDDDD for boilers has been vacated, this facility is subject to the requirements of CAA 112 (j). Therefore, the Maximum Achievable Control Technology (MACT) application submittal requirements have been added to the amended permit.

This permit action also includes a reopening for a new operating limit for the water flow rate to the control equipment for the Lime Kiln that applies as a result of the most recent performance test, and the Notice of Compliance dated January 8, 2009.

1.4 Facility Emissions:

Table 1. Title I Emissions Increase Summary

Pollutant	Emissions Increase from the Modification* (tpy)	PSD/112(g) Significant Thresholds for major sources	NSR/112(g) Review Required? (Yes or No)
PM	5.01	25	No
PM ₁₀	5.01	15	No
NO _x	25.6	40	No
SO ₂	4.3	40	No
CO	0	100	No
Ozone (VOC)	0.40	40	No
Lead	0	0.6	No
Individual and Total HAPs	3.03/3.44	10/25	No

* Note: The emissions increase from the lime kiln was calculated based on Actual-to-Potential emissions, with no baseline taken for the HAPs.

Table 2. Total Facility Potential to Emit Summary (tpy)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC	Lead	Single HAP	All HAPs
Total Facility Limited Potential Emissions	507	560	1,965	1,581	595	7.50	0.6	> 10	> 25
Total Facility Actual Emissions (2006)	180	176	407	579	547	449	0.5	HAPs not reported in emission inventory	

Table 3. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD	PM, PM ₁₀ , SO ₂ , NO, and CO	N/A	VOC
Part 70 Permit Program	PM ₁₀ , SO ₂ , NO, and CO	N/A	VOC
Part 63 NESHAP	Single and Total HAPs	N/A	N/A

2. Regulatory and/or Statutory Basis

New Source Review

The total heat input capacity of the coal-fired boilers at this source is greater than 250 MMBtu/hr. Therefore, this source is one of the 28 source categories specified in New Source Review regulations. The facility is an existing major source under New Source Review regulations. The changes requested by the facility do not trigger New Source Review.

Part 70 Permit Program

The facility is a major source 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.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

This existing facility is a major source for HAPs and includes coal-fired boilers which were subject to NESHAP, Subpart DDDDD. However, since 40 CFR 63, Subpart DDDDD was vacated by the U.S. EPA on March 26, 2007, this facility is subject to CAA 112 (j) and is required to submit MACT applications for the 112 (j) affected sources. Therefore, the MACT application submittal requirements have been added to the amended permit.

CAM Assurance Monitoring (CAM)

The uncontrolled PM/PM₁₀ emissions from the lime kiln (EU 005) are greater than the Part 70 major source thresholds. Particulate emissions from the lime kiln are controlled by wet scrubber CE 004. The scrubber associated with this unit is necessary to ensure compliance with the applicable emission limits. Therefore, the lime kiln (EU 005) is subject to the requirements of 40 CFR pt. 64 (CAM). Since the controlled PM/PM₁₀ emissions are each less than the Part 70 major source threshold (100 tons/yr), the CAM requirements for the existing lime kiln will be included in the reissuance for the total facility permit and will not be addressed in this permit amendment.

Minnesota State Rules

The only affected unit under this amendment is the lime kiln (EU 005) and this unit is subject to the following state rules:

- Minn. R. 7011.0610 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment

Table 4. Regulatory Overview of Units Affected by the Modification/Permit Amendment

GP/EU	Applicable Regulations	Comments
TF	CAA 112 (j)	MACT application submittal requirements
EU 005	Title I Condition: 40 CFR § 52.21(k); Minn. R. 7007.3000	Limit to avoid violation of national ambient air quality standards
	Minn. R. 7011.0610	Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment

3. Technical Information

3.1 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 5 summarizes the periodic monitoring requirements for the emission unit affected by this amendment for which the monitoring required by the applicable requirement is nonexistent or inadequate.

Table 5. Periodic Monitoring

EU	Requirement (basis)	Additional Monitoring	Discussion
EU 005	PM & PM10: ≤ 2 lbs/hr (Title I condition: 52.21(k)) PM: ≤ 0.3 gr/dscf Opacity $\leq 20\%$ (Minn. R. 7011.0610)	Recordkeeping: Daily records of the pressure drop across the scrubber and the scrubber liquid flow rate. Periodic stack testing.	The scrubber system must be operated at the same pressure drop and flow rate ranges as the last compliant performance test. This insures compliance by maintaining the same conditions that were present when compliance was last demonstrated. Opacity testing will also be conducted to show compliance with the standard.
	SO ₂ : ≤ 5.0 lbs/hr normal operation; ≤ 40.0 lbs/hr during start-up (Title I condition: 52.21(k) & Minn. R. 7007.0800) Coke Sulfur Content: ≤ 0.8 wt% (Title I condition: 52.21(k) & Minn. R. 7007.3000) Pulverized coal Sulfur Content: ≤ 0.5 wt% (Title I condition: 52.21(k) & Minn. R. 7007.3000)	Fuel Testing: Determine the sulfur content of each coke delivery. Periodic stack testing.	The facility can use either a supplier certification or the current ASTM sampling and analysis methods. The Pulverized coal will be taken from the coal stock for the boilers; therefore it has the same limit. Anthracite coal is < 1.0 wt% sulfur by definition; therefore no limit is needed.

3.2 Calculations of Potential to Emit and Emissions Increase Analysis

Attachment 1 to this TSD contains the Title I net emissions increase calculations for the fuel switch project for the lime kiln (EU 005). This demonstrates that this project is not a major modification for PSD.

Calculations for SO₂ emissions are based off the permitted sulfur contents in the fuel. No limit was established for the sulfur content in anthracite coal because the maximum sulfur content of anthracite coal, by definition, is 1.0 wt percent and will not cause an exceedance of the threshold.

3.3 Insignificant Activities

This amendment does not involve installations of any insignificant units. No changes to the insignificant units are being made.

3.4 Permit Organization

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

3.5 Comments Received

Public Notice Period: January 17, 2009 – February 17, 2009

EPA 45-day Review Period: January 17, 2009 – March 2, 2009

No comments were received

4. Conclusion

Based on the information provided by American Crystal Sugar, the MPCA has reasonable assurance that the operation of the emission facility, as described in the Air Emission Permit No. 11900001-003, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

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AQ File No. 29C, DQ 693, 1294, 2127, 2401

Attachments: 1. Emissions Increase Calculation Spreadsheets
2. CD-01 Forms