

**AIR EMISSION PERMIT NO. 11900001- 001
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
Total Facility Operating Permit	January 13, 1995
Major Amendment	January 8, 1999
Major Amendment	October 11, 1999
Administrative Amendment	March 31, 2000

This permit 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 as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Pt 70/NSR Authorization

Issue Date: June 26, 2001

Expiration: June 26, 2006

All Title I Conditions do not expire.

Rodney E. Massey, P.E.
Director
North/South District

for Karen A. Studders
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. Certain requirements which have been determined not to apply are listed in Table A of this permit.

FACILITY DESCRIPTION:

American Crystal Sugar Company owns and operates a sugar beet processing plant at Hwy 75 South, Crookston, Polk County, Minnesota. In addition to this stationary source, the Company owns processing plants in both East Grand Forks and Moorhead, Minnesota and also has a research center in Moorhead. The Crookston plant consists of three coal-fired (subbituminous) boilers which produce process steam; two natural gas-fired pulp dryers; 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 will typically startup two to three days before starting to slice sugar beets and shutdown two to four days after beet slicing has stopped.

This permit is a Title V permit combined with a PSD major amendment. This is the final of the four sugar beet facilities in Minnesota to receive a Title V permit. This permit reflects limits and conditions agreed to by the MPCA and EPA in the previous three permits issued to the other facilities.

The MPCA issued a major amendment for the elimination of operating hour restrictions on the sugar dryer, sugar cooler and pellet cooler on May 21, 1999. An Environmental Assessment Worksheet (EAW) was required as a part of that permit application because the project was projected to result in a greater than 100 ton per year increase air emissions. An air emissions risk analysis (AERA) was also conducted as a part of the EAW process.

Besides being the first Title V permit for this facility, this permit also concerns a number of unrelated changes to the previous PSD permit. Some of the changes include corrections to errors found in the previous permit. One change concerns follow up addressing a modeling related issue with how sulfur dioxide emissions from the boilers are measured and compared to their limits. Another change concerns addressing the results of measurements of key fugitive emission parameters from roads that were made last fall at the facility. Increased watering for unpaved roads was proposed to offset the potential increase in particulate emissions that would otherwise have resulted from the use of these new parameters in emission calculations. A third change is the extension of the monitoring season for the ambient measurement of hydrogen sulfide. See the technical support document for this permit for a more complete description of the changes made to the permit.

Several of these changes were Title I modifications, and as such required a major amendment. There is no change in air emissions associated with this permit. In addition, there is no construction authorized with this permit.

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 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
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
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A and/or B.	Minn. R. ch. 7017
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued as required in this permit.	Minn. R. 7007.0800, subp. 4(D)
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)
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
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 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
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, subp. 2; Minn. R. 7007.0800, subp. 16(J)
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
Fugitive Control Plan (continued): Examples of items to consider in the study include stockpile sizes, number of disturbances, VMT, number of trucks, water application intensity, etc. This plan should also include a schedule defining a frequency when the study will be redone so that the affect of any changing conditions at the facility on fugitive emissions can be examined.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
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)
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)
Record keeping: 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)
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
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
Emissions Inventory Report: due 91 days after the 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. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
Parameters Used in Modeling: The stack heights, emission rates, and other parameters used in the modeling for this major PSD modification are listed in the Appendix 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: American Crystal Sugar - Crookston

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<p>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.</p> <p>For changes that do not involve an increase in an emission rate and that do not require a permit amendment, this 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.</p> <p>For changes involving increases in emission rates and that 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.</p> <p>For changes involving increases in emission rates and that require a permit amendment other than a minor amendment, the proposal must be submitted with the permit applicaiton.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000</p>
<p>Hydrogen Sulfide: less than or equal to 0.05 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.</p>	<p>Minn. R. 7009.0080</p>
<p>Hydrogen Sulfide: less than or equal to 0.03 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.</p>	<p>Minn. R. 7009.0080</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 4</p>
<p>Re-modeling Protocol for Air Toxics: due within 4 years of May 21, 1999. This protocol will describe the proposed modeling methodology and input data, clearly identifying any changes from the original modeling protocol and air emissions risk analysis (AERA) dated March 4, 1999 and revised/supplemented on April 2, 1999, May 24, 1999, and May 2000. If no changes have been made, the protocol may consist solely of the statement "no changes have been made." This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Re-modeling Air Toxics Study Results: due within 5 years of May 21, 1999. To be submitted after the MPCA has reviewed and approved the Re-modeling Protocol. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>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.</p>	<p>Minn. R. 7011.0010, subp. 4</p>
<p>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.</p>	<p>40 CFR Section 60.11(c)</p>
<p>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.</p>	<p>40 CFR Section 60; 40 CFR Section 61</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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
Sulfur Content of Fuel: less than or equal to 0.50 percent by weight sulfur content for subbituminous coal, as received.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 4 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
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 with no less than the minimum number of fields online during the most recent performance test that showed compliance with the applicable particulate matter emission limits listed above.	Title I Condition: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 14
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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Performance Test: due before 01/12/2003 and every 36 months thereafter to measure particulate matter, particulate matter < 10 microns, sulfur dioxide, and nitrogen oxides. Tests shall be conducted at intervals of 36 months between test dates.	Title I Condition: testing of emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pretest Meeting: due 7 days before each performance test	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test	Minn. R. 7017.2035, subp. 1
Performance Test Report - Microfiche Copy - due 105 days after each performance test	Minn. R. 7017.2035, subp. 2
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
<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 American Society of Testing and Materials (ASTM) sampling and analysis methods. <p>With either method, the weight represented by each sulfur content analysis shall be less than or equal to the five train cars. These records shall be maintained for a minimum of five years from the date the information was obtained.</p>	Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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
Sulfur Content of Fuel: less than or equal to 0.50 percent by weight sulfur content for subbituminous coal, as received.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 4 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
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 with no less than the minimum number of fields online during the most recent performance test that showed compliance with the applicable particulate matter emission limits listed above.	Title I Condition: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 14
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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Performance Test: due before 01/12/2003 and every 36 months thereafter to measure particulate matter, particulate matter < 10 microns, sulfur dioxide, and nitrogen oxides. Tests shall be conducted at intervals of 36 months between test dates.	Title I Condition: testing of emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pretest Meeting: due 7 days before each performance test	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test	Minn. R. 7017.2035, subp. 1
Performance Test Report - Microfiche Copy - due 105 days after each performance test	Minn. R. 7017.2035, subp. 2
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
<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 American Society of Testing and Materials (ASTM) sampling and analysis methods. <p>With either method, the weight represented by each sulfur content analysis shall be less than or equal to the five train cars. These records shall be maintained for a minimum of five years from the date the information was obtained.</p>	Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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
Sulfur Content of Fuel: less than or equal to 0.50 percent by weight sulfur content for subbituminous coal, as received.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 4 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
Nitrogen Oxides: less than or equal to 120.2 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 with no less than the minimum number of fields online during the most recent performance test that showed compliance with the applicable particulate matter emission limits listed above.	Title I Condition: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 14
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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Performance Test: due before 01/12/2003 and every 36 months thereafter to measure particulate matter, particulate matter < 10 microns, sulfur dioxide, and nitrogen oxides. Tests shall be conducted at intervals of 36 months between test dates.	Title I Condition: testing of emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pretest Meeting: due 7 days before each performance test	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test	Minn. R. 7017.2035, subp. 1
Performance Test Report - Microfiche Copy - due 105 days after each performance test	Minn. R. 7017.2035, subp. 2
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
<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 American Society of Testing and Materials (ASTM) sampling and analysis methods. <p>With either method, the weight represented by each sulfur content analysis shall be less than or equal to the five train cars. These records shall be maintained for a minimum of five years from the date the information was obtained.</p>	Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

Subject Item: EU 004 Intercampaign Boiler**Associated Items:** SV 004

What to do	Why to do it
Fuel use limited to natural gas and propane only	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input	Minn. R. 7011.0515, 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. 7011.0515, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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 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 sulfur content for the coke, as received.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Fuels Allowed: industrial oven coke as the main fuel source and propane and wood fuels for initiating combustion of coke	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5
Pressure Drop: greater than or equal to 25 inches of water column	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4
Water flow rate: greater than or equal to 20 gallons/minute	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4
TESTING REQUIREMENTS	hdr
Performance Test: due before 12/31/2001 and every 36 months thereafter, to measure particulate matter, particulate matter < 10 microns, sulfur dioxide, and nitrogen oxides. Tests shall be conducted at intervals of 36 months between test dates.	Title I Condition: testing of emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pretest Meeting: due 7 days before each performance test	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test	Minn. R. 7017.2035, subp. 1
Performance Test Report - Microfiche Copy - due 105 days after each performance test	Minn. R. 7017.2035, subp. 2
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

<p>Fuel Sulfur Content: The Permittee shall determine the sulfur content of each delivery of coke 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 American Society of Testing and Materials (ASTM) sampling and analysis methods. <p>With either method, the weight represented by each sulfur content analysis shall be less than or equal to the one train car. These records shall be maintained for a minimum of five years from the date the information was obtained.</p>	<p>Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5</p>
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TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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)
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5
Pressure Drop: greater than or equal to 5 inches of water column and less than or equal to 15 inches of water column	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4
Water flow rate: greater than or equal to 20 gallons/minute	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

Subject Item: EU 008 Sugar Dryer

Associated Items: CE 006 Wet Scrubber - High Efficiency w/Lime Slurry
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. 7011.0715, 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. 7011.0715, subp. 1(B)
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5
Pressure Drop: greater than or equal to 5 inches of water column and less than or equal to 15 inches of water column	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4
Water flow rate: greater than or equal to 57 gallons/minute	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4
TESTING REQUIREMENTS	hdr
Performance Test: due before 12/31/2003 and every 60 months thereafter, to measure particulate matter and particulate matter < 10 microns. Tests shall be conducted at intervals of 60 months between test dates.	Title I Condition: testing of emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pretest Meeting: due 7 days before each performance test	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test	Minn. R. 7017.2035, subp. 1
Performance Test Report - Microfiche Copy - due 105 days after each performance test	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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)
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5
Pressure Drop: greater than or equal to 3.5 inches of water column	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4
Water flow rate: greater than or equal to 280 gallons/minute	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4
TESTING REQUIREMENTS	hdr
Performance Test: due before 12/31/2003 and every 60 months thereafter, to measure particulate matter and particulate matter < 10 microns. Tests shall be conducted at intervals of 60 months between test dates.	Title I Condition: testing of emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pretest Meeting: due 7 days before each performance test	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test	Minn. R. 7017.2035, subp. 1
Performance Test Report - Microfiche Copy - due 105 days after each performance test	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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)
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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)
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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>	Title I Condition: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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)
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirements for emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7007.0800, subp. 14
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: control equipment requirements for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp.2; Minn. R. 7007.0800 subp. 4; Minn. R. 7007.0800, subp. 5
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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.08700, subp. 2; Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Performance Test: due before 12/31/2003 and every 60 months thereafter, to measure particulate matter and particulate matter < 10 microns. Tests shall be conducted at intervals of 60 months between test dates.	Title I Condition: testing of emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pretest Meeting: due 7 days before each performance test	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test	Minn. R. 7017.2035, subp. 1
Performance Test Report - Microfiche Copy - due 105 days after each performance test	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirements for emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7007.0800, subp. 14
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: control equipment requirements for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp.2; Minn. R. 7007.0800 subp. 4; Minn. R. 7007.0800, subp. 5
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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.08700, subp. 2; Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Performance Test: due before 12/31/2003 and every 60 months thereafter, to measure particulate matter and particulate matter < 10 microns. Tests shall be conducted at intervals of 60 months between test dates.	Title I Condition: testing of emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pretest Meeting: due 7 days before each performance test	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test	Minn. R. 7017.2035, subp. 1
Performance Test Report - Microfiche Copy - due 105 days after each performance test	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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)
POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Monitoring of Pollution Control Equipment: the Permittee shall monitor and record the pressure drop across the 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 operation and maintenance 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: control equipment requirements for emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7007.0800, subp. 14
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: control equipment requirements for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp.2; Minn. R. 7007.0800 subp. 4; Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Performance Test: due before 12/31/2001 and every 36 months thereafter, to measure particulate matter and particulate matter < 10 microns. Tests shall be conducted at intervals of 36 months between test dates.	Title I Condition: testing of emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pretest Meeting: due 7 days before each performance test	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test	Minn. R. 7017.2035, subp. 1
Performance Test Report - Microfiche Copy - due 105 days after each performance test	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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)
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirements for emissions subject to a limit based on 40 CFR Section 52.21(k), Minn. R. 7007.0800, subp. 14
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: control equipment requirements for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp.2; Minn. R. 7007.0800 subp. 4; Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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)
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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)
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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)
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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)
POLLUTION CONTROL EQUIPMENT 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 operation and maintenance 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: control equipment requirement for emissions subject to a limit based on 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 5</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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, subp. 4; Minn. R. 7007.0800, subp. 5; Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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, subp. 4; Minn. R. 7007.0800, subp. 5; Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 001

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, subp. 4; Minn. R. 7007.0800, subp. 5; Minn. R. 7007.0800, subp. 14

TABLE B: SUBMITTALS

06/26/01

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

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 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
Fugitive Control Plan	due 60 days after Permit Issuance for review and approval by the Commissioner. Include in the plan a schedule to complete a study that demonstrates how the actual conditions at the facility compare to the assumptions made in calculating emissions for the modeling done in support of this permit.	Total Facility
Operation and Maintenance Plan	due 60 days after Permit Issuance revise the existing plan to include information pertaining to the new pollution control equipment that is added with this modification. The plan shall also include the corrective actions to be taken should any of the monitored parameters on the pollution control equipment fall outside their normal operating ranges.	Total Facility

TABLE B: RECURRENT SUBMITTALS

06/26/01

Facility Name: American Crystal Sugar - Crookston

Permit Number: 11900001 - 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.	Total Facility
Compliance Certification	due 30 days after end of each calendar year following Permit Issuance. 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 MATERIAL

Facility Name: American Crystal Sugar - Crookston
Permit Number: 11900001-001

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 #	PM10	SO₂	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
DRAFT AIR EMISSION PERMIT NO. 11900001-001

This technical support document is for all the interested parties of the draft permit. The purpose of this document is to set forth the legal and factual basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

1.1. Applicant and Stationary Source Location:

Owner/Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 2063)
American Crystal Sugar Company 101 North Third Street Moorhead, Minnesota 56560 Mr. Joel Smith (218) 236-4347	Crookston Processing Plant Hwy 75 South Crookston, Minnesota Polk County

1.2. Description of the Facility

American Crystal Sugar Company (Company) owns and operates a sugar beet processing plant at Highway 75 South, Crookston, Polk County, Minnesota. In addition to this stationary source, the Company owns processing plants in both East Grand Forks and Moorhead, Minnesota and also has a research center in Moorhead. The Crookston plant consists of three coal-fired (subbituminous) boilers which produce process steam, two natural gas-fired pulp dryers, 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.

Particulate Matter (PM) emissions from the three boilers are controlled by electrostatic precipitators (ESP). Other pollution control equipment consists of a multiclone with a hopper-aspiration fabric filter system for each pulp dryer, a cyclone for the pellet cooler, a fabric filters for sugar storage and conveying, a cyclone for the lime kiln, and fabric filters for the sugar dryer and sugar cooler. Coal, coke and limerock are received by rail and stored in uncovered storage piles.

The Crookston plant employs about 250 people and it operates from late August through May of each year, 24 hours per day. The plant will typically start up two to three days before starting to slice sugar beets and shut down two to four days after beet slicing has stopped.

1.3 Description of the Activities Allowed By This Permit Action

This permit is a Title V permit combined with a Prevention of Significant Deterioration (PSD) major amendment. This is the final of the four sugar beet facilities in Minnesota to receive a Title V permit. This permit reflects limits and conditions agreed to by the MPCA and Environmental Protection Agency (EPA) in the previous three permits issued to the other facilities.

The MPCA issued a major amendment for the elimination of operating hour restrictions on the sugar dryer, sugar cooler and pellet cooler on May 21, 1999. An Environmental Assessment Worksheet (EAW) was required as a part of that permit application because the project was projected to result in a greater than 100 ton per year increase in air emissions. An air emissions risk analysis (AERA) was also conducted as a part of the EAW process.

Besides being the first Title V permit for this facility, this permit also concerns a number unrelated changes to the previous PSD permit. See the following discussion for a complete description. The majority of these changes were Title I modifications, and as such required a major amendment. There is no change in air emissions associated with this permit. In addition, there is no construction authorized with this amendment.

No permit application was formally submitted for all of these changes, although there is correspondence in the file for each of them. Some of these changes were submitted individually as different types of amendments (e.g. the administrative amendment for the performance test extension).

Information Specific to Each Change Made to the Previous PSD Permit

One change this amendment makes is to amend the permit limits that were established for sulfur dioxide on the boilers at the facility in Air Emission Permit No. 11900001-023. The limits were established to protect the ambient standards for sulfur dioxide as a part of the ambient air modeling done for that permit per PSD regulations. The ambient standards for sulfur dioxide have both long term and short term values. There was a concern that the boilers may not be able to meet the sulfur dioxide permit limits on a short-term basis. As a result the Company was required by Air Emission Permit No. 11900001-023 to compare their fuel sampling and sulfur analysis procedure with a continuous emission monitor (CEM) for sulfur dioxide. The results were submitted by the Company in a letter dated June 4, 1999. The MPCA responded on August 5, 1999. The MPCA response highlighted that the data showed short-term emission rates (as measured by the CEM) significantly above the results predicted by the fuel sampling and sulfur analysis procedure. The letter went on to lay out a number options that the Company could pursue. The Company chose to remodel at the higher observed short-term emission rates (1.23 lb/MMBtu versus 0.93 lb/MMBtu). As outlined in a letter from Greg Raetz at Braun Intertec Corp. dated September 15, 1999, the facility was able to model compliance at these higher rates.

For future reference these new short-term emission rates must now be included in the permit for the facility. Modification of the sulfur dioxide limits on boilers #1, #2, or #3

in the future will require the modification of both the long-term and short-term sulfur dioxide permit limits. By demonstrating compliance with the long-term sulfur dioxide limits, the Permittee is also assumed to be in compliance with the short-term limits.

A second change this amendment makes is to redefine the periods of time in which the facility must take action on its paved and unpaved roads in a manner that is more flexible in its application from year to year. Currently the permit defines the beet delivery period specifically by dates and requires that action be taken on the roads at the facility during this time. The problem with this approach is that the beet delivery period, will vary from year to year based on the size of the harvest and prevailing weather conditions. The new time periods used in this permit are described qualitatively. They are specified in such a way so as to allow flexibility in application from year to year. It is felt that it will be clear, to both the Company and MPCA compliance staff, when the "beet delivery period" is underway without having specific dates in the permit.

A third change corrects an oversight that was made with the previous amendment concerning the pulp pellet loadout unit (EU 023). This unit is subject to 7011.1005 and these requirements have been added to the permit.

A fourth change concerns the monitoring period for hydrogen sulfide at the facility. The period has been extended from the May through September period to April through October, based on the high values recorded at both the start and the end of the 1999 monitoring season. In addition, these requirements were clarified as being state only requirements.

An fifth change involves incorporation of the results of the ambient modeling for particulate emissions that was done in response to the fugitive parameter testing done during the fall of 1999. The fugitive parameter testing involved the sampling and measurement of the silt loading on paved roads and the silt content and moisture of the unpaved roads at the facility. The testing showed that some of the values used in the previous particulate modeling were not conservative when compared with the measured site-specific values. As a result, these site-specific values were used to recalculate the particulate emission rates for the cases where the previous values were not conservative. To maintain the emission rates at or below the levels they were previously, year-round watering was incorporated for the unpaved spent lime disposal road. Watering is not required during freezing conditions due to safety concerns. See the attached July 24, 2000, letter from Greg Raetz to Trent Wickman for more details. Since the actual silt loading on paved roads and the silt content of unpaved roads have now been measured, and their impacts determined, these two permit items are now being removed.

A sixth change involves the extension of the deadline to conduct a performance test on SV 010 and one of SV 011-016 (sugar handling sources) at the facility for 60 days (until July 20, 2000). This was requested in an administrative amendment application, dated March 31, 2000. The tests were conducted July 11 and 12, 2000. Based on the results of the tests, which were less than 10 percent of the limits, no further testing is required.

A seventh change is the removal of the powdered sugar source (EU013, SV018) from the factory. The baghouse that served this source (CE016) and its stack are still onsite and have not been modified. The baghouse may serve another source in the future, but it is unknown at the time this permit is being drafted which source that may be. When that determination is made by ACS, they will contact the MPCA to determine a course of action.

A revised risk analysis was received on May 12, 2000 that incorporated the H₂S monitoring data from the summer of 1999. A memo, dated August 22, 2000, discussing the results of this analysis is attached.

In addition, other permit requirements that have already been fulfilled were removed. Typographical errors also have been corrected.

It should be noted that even though operating restrictions have been included in the permit based on previous performance tests, these restrictions can be changed (based on subsequent compliant tests) without first obtaining a permit amendment.

The “risk recalculation” requirement was changed to follow the guidelines proposed by the MPCA’s internal air permit group. The high hazard quotients calculated previously are largely due to H₂S (again see the memo, dated August 22, 2000). Through the MPCA’s enforcement response to the monitored H₂S values, it is expected that future H₂S values will be brought down. For these reasons a less rigorous approach was taken in this permit.

The public comment period for this permit ran from May 23, 2001 to June 22, 2001. No comments were received.

1.4. Facility Emissions:

Table 1. Facility Classification

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

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

2. Regulatory and/or Statutory Basis

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

Regulatory Overview of Units Affected by the Modification

Table 4. Regulatory Overview

*EU, GRP, or SV #	Applicable Regulations	Comments
SV001 – SV003	40 CFR § 52.21	Modification of short term sulfur dioxide emission limits and other limits, some of which were based on PSD review.

3. Technical Information

The monitoring and recordkeeping found in this permit is identical to that found in the other three sugar beet processing plant Title V permits that have already been issued in the state of Minnesota. Those facilities are: Southern Minnesota Beet Sugar Coop, originally issued April 1, 1998; American Crystal Sugar Company plants located in Moorhead and East Grand Forks, originally issued March 10, 1998 and June 8, 2000, respectively. For that reason, a detailed description of the monitoring and recordkeeping will not be presented here. Interested parties can refer to the technical support documents for those permits for more information.

As described above, this permit also modifies previously established short-term PSD limits for sulfur dioxide which were based on ambient modeling. The detailed development and basis for this permit can be found in the attachments to this document. Since some of the permit limits that are being changed are based on PSD, changing them requires a major amendment. For example, one PSD-related condition that was changed is the redefinition of the beet delivery period.

4. Conclusion

Based on the information provided by the Company, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 11900001-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Trent Wickman, Stuart Arkley, Cary Hernandez

Peer Review: Craig Thorstenson

Attachments: Letter from Joel Smith, dated June 4, 1999
Letter from Trent Wickman, dated August 5, 1999
Letter from Greg Raetz, dated September 15, 1999
Letter from Greg Raetz, dated July 24, 2000
Memo from Trent Wickman, dated August 22, 2000