

AIR EMISSION PERMIT NO. 03900028- 009

IS ISSUED TO

Al-Corn Clean Fuel

Al-Corn Clean Fuel
Highway 14 West
Claremont, Dodge County, MN 55924

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	Issuance Date	Action No.
Total Facility Operating Permit	12/21/1995	4/29/96	001
Total Facility Operating Permit	05/08/1997	7/25/1997	002
Major Amendment	05/28/1998	9/28/1998	003
Major Amendment	05/10/1999	10/21/1999	004
Major Amendment		withdrawn	005
Major Amendment	2/20/2001	6/1/2001	006
Major Amendment	10/17/2001	4/19/2002	007
Major Amendment	5/30/02	1/13/2003	008
Major Amendment	3/31/2003 and 9/17/2004	See Below	009

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

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

Issue Date: January 10, 2005

Expiration: Permit does not expire
All Title I Conditions do not expire.

Michael J. Tibbetts, Manager
Land and Water Quality Permits Section
Industrial Division

for Sheryl A. Corrigan
Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

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

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

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

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

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

Al-Corn Clean Fuel is a fuel grade dry-mill ethanol plant located approximately one half mile west of Claremont, Minnesota, on Highway 14. The plant, as initially designed, used four million bushels of corn per year to produce ten million gallons of fuel grade ethanol. The facility currently has a permitted production capacity of 30 million-gallon-per-year (MMGal/yr) and this permit is increasing the production capacity to 34.9 MMGal/yr. A by-product of the ethanol process is dry distillers grain with solubles (DDGS) which is used as livestock feed.

The facility accepted limits on the amounts of particulate matter and volatile organic compounds that could be emitted to the atmosphere, so that it is classified as a non-major source under both the Part 70 program (40 CFR § 70.2) and the federal New Source Review program (40 CFR §52.21). The facility will be limited to a production capacity of 34.9 MMGal/year of undenatured ethanol; and a throughput capacity of 368,755 tons/year of grain and 125,000 tons/year of DDGS.

PERMIT AMENDMENT (ACTION 009)

On August 14, 2002, Al-Corn Clean Fuel (Al-Corn) signed a consent decree (CD) that required Al-Corn to implement a program of compliance at the ethanol plant. Under the program of compliance required by the CD, Al-Corn was required to accept a 95 ton per year (TPY) emission limit for VOC's, CO, NO_x, SO₂, PM, and PM₁₀. To incorporate this facility-wide change, Al-Corn was required to apply for a modification to its existing operating permit while adhering to the approved Control Technology Plan (CTP). The CD also stated that Al-Corn must apply for the modification to its existing operating permit within 180 days following the start-up of the last piece of control equipment approved in the CTP.

Al-Corn is also proposing to increase the permitted undenatured ethanol production limit of the facility from 30 million gallons per year (MMGal/yr) to 34.9 MMGal/yr. Additional controls have also been added to the fuel ethanol loadout. Previous fugitive emission estimates for the ethanol loadout assumed that trucks hauled fuel ethanol only. Al-Corn discovered that some of the trucks may have previously hauled gasoline, resulting in gasoline fugitive emissions during truck loading. To avoid monitoring trucks for previous contents, all loadout emissions are now collected and routed to the Loadout Flare (CE 008) for combustion control. Nitrogen oxides (NO_x) limits will be placed on the combustion units at the facility which are currently covered by the propane fuel use limit. This NO_x limit will replace the propane fuel usage limit.

During the facility expansion that was completed in 2001, the hammermill system was modified. A second hammermill was added to the facility and the milled grain transfer system was modified. The old system used a blower to pull the grain through the hammermill and pneumatically move it to the next stage of the process. The hammermill baghouse (CE002) was used as the milled grain receiver. In the new system, the milled grain is pulled through the hammermills to a hopper bin. The air used to move the grain through the hammermills to the hopper is discharged to a baghouse (CE007). The milled grain is then pulled from the hopper to the next stage of the process and the hammermill baghouse (CE002) is still used as the grain receiver. During the expansion the hammermill baghouse (CE002) was replaced with a higher capacity baghouse. Due to the hammermill system modifications and the larger capacity at

CE002; CE007 and CE002 now operate efficiently with very low pressure drops. Al-Corn requested the pressure drop range for these units be changed from 2 to 8 inches of water column to 1 to 8 inches of water column. The second hammermill was added to the facility equipment list for the existing hammermill baghouse stack (SV002); however, this baghouse vents out a separate stack. Therefore, Al-Corn requested the addition of a hammermill hopper baghouse stack (SV019).

A sixth emergency generator was also added during the 2001 expansion. It is diesel-fired with a maximum fuel burning capacity of 133.2 gallons per hour. The new generator was installed in place of the existing 1300 kW process generator (EU049) and EU049 was installed to service the new DDGS Dryer #2 (EU037). The total facility diesel fuel limit remains the same at 49,725 gallons per year.

The corn bin (EU036) and dump pit (EU051) were never constructed during a recent plant expansion and, therefore, have been removed from the permit. The removal of these units will not effect air emissions because the facility grain throughputs will not change.

The additional grain handling operation will result in PM and PM10 emission increases of 0.11 and 0.06 tons per year, respectively. Al-Corn will not increase the fuel use limit currently set for the emergency generators; therefore, the additional emergency generator does not increase potential emissions.

The facility meets synthetic minor source status with respect to 40 CFR 52.21. The facility past actual allowable emissions compared to future potential emissions do not exceed the Prevention of Significant Deterioration (PSD) significant emission thresholds. Emissions of all criteria pollutants are less than 95 tons per year with all existing pollution control equipment in operation. With the proposed limit reductions, the facility can remain a synthetic minor source with respect to the 40 CFR Part 70 Title V permitting and PSD regulations based on the conditions proposed in this permit.

FEDERAL CONSENT DECREE

This permit contains conditions and requirements of the federal Consent Decree as amended, Civil Action Number 02-CV-3792 JNE/RLE. The citation for those permit conditions contains the phrase “Consent Decree paragraph < >”, which identifies the paragraph number on which the permit condition is based. See Consent Decree para. 14.

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

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
<p>This facility and the EPCO Carbon Dioxide Products Inc. facility constitute a single stationary source under 40 CFR 52.21 and 40 CFR 70.2. EPCO operates under a separate air permit, Permit No. 03900031-002.</p> <p>All permit amendment requests must assess the potential emissions and potential emissions increases at both companies when modifications are proposed.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2</p>
<p>This permit shall not alter or affect the liability of an owner or operator for any violation of applicable requirements prior to or at the time of permit issuance.</p>	<p>Minn. R. 7007.1800 (C)(2)</p>
<p>Facility-wide Limits</p>	<p>hdr</p>
<p>Sulfur Dioxide: less than or equal to 95.0 tons/year using 12-month Rolling Sum</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; and Minn. R. 7007.0200 Consent Decree para. 9 and 26a</p>
<p>Nitrogen Oxides: less than or equal to 95.0 tons/year using 12-month Rolling Sum</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; and Minn. R. 7007.0200 Consent Decree para. 9 and 26a</p>
<p>Volatile Organic Compounds: less than or equal to 95.0 tons/year using 12-month Rolling Sum</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; and Minn. R. 7007.0200 Consent Decree para. 9 and 26a</p>
<p>Carbon Monoxide: less than or equal to 95.0 tons/year using 12-month Rolling Sum</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; and Minn. R. 7007.0200 Consent Decree para. 9 and 26a</p>
<p>Total Particulate Matter: less than or equal to 95.0 tons/year using 12-month Rolling Average</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; and Minn. R. 7007.0200 Consent Decree para. 9 and 26a</p>
<p>Particulate Matter < 10 micron: less than or equal to 95.0 tons/year using 12-month Rolling Sum</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; and Minn. R. 7007.0200 Consent Decree para. 9 and 26a</p>
<p>HAP-Single: less than or equal to 9.0 tons/year using 12-month Rolling Sum</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200 Consent Decree para. 15(i) and 26b</p>
<p>HAPs - Total: less than or equal to 24.0 tons/year using 12-month Rolling Sum</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200 Consent Decree para. 15(i) and 26b</p>
<p>PRODUCTION, OPERATING, AND PERFORMANCE TEST REQUIREMENTS</p>	<p>hdr</p>
<p>Production: less than or equal to 34900000 gallons/year using 12-month Rolling Sum of ethanol (200-proof, prior to addition of denaturant).</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Process Throughput: less than or equal to 368755 tons/year using 12-month Rolling Sum of grain assuming 56 pounds per bushel of grain.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Process Throughput: less than or equal to 125000 tons/year using 12-month Rolling Sum of distillers dry grains (DDGS).</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification 40 CFR Section 70.2 and Minn. R. 7007.0200.</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Do not cause or permit a building or its appurtenances or an open area to be constructed, used, repaired, or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne.	Minn. R. 7011.0150
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)
The Permittee shall not produce wetcake except under conditions of shutdown or breakdown of the dryer or associated air pollution control equipment. For each event leading to the production of wetcake, the Permittee shall conduct a root cause failure analysis of the event and submit a report of the analysis to the commissioner within 15 days (a reasonable period of time). Please note that requirements for reporting of shutdowns and breakdowns must be followed as well. Those requirements are outlined below. When wetcake is produced, it will be stored on-site for no more than 72 hours unless the outside temperature is less than 55 degrees F. The facility will in all cases move the wetcake off-site as soon as possible.	Minn. R. 7019.1000, subp. 4 and Minn. R. 7007.0800, subp. 2
General Performance Test (PT) Requirements: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. PT Notifications (written): due 30 days before each Performance Test PT Plan: due 30 days before each Performance Test PT Pre-test Meeting: due 7 days before each Performance Test PT Report: due 45 days after each Performance Test PT Report - Microfiche: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4, and Minn. R. 7017.2035, subp. 1 and 2
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
RECORDKEEPING	hdr
Recordkeeping: By the 15th day of every month, calculate and record the gallons of 200-proof ethanol produced during the previous month and the gallons of 200-proof ethanol produced during the previous 12 months (12-month rolling sum).	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
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)
Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report, unless specified otherwise in Table A. Records which must be retained at this location include all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, records of storage tank dimension measurements, 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)
Fuel Usage Recordkeeping. By the 15th day of each month: 1) record the amount of fuel combusted in each diesel engine during the previous calendar month; 2) calculate and record usage for all diesel engines for the previous twelve-month period, and compare to the limit set at the total facility level.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21, 40 CFR Section 70.2, and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 5
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
MONITORING	hdr
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.	Minn. R. 7007.0800, subp. 4(D)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

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 and/or B, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, such as for system breakdowns, repairs, calibration checks, and zero and span adjustments (as applicable). Monitoring records should reflect any such periods of process shutdown.	Minn. R. 7007.0800, subp. 4(D)
NOTIFICATIONS AND SUBMITTALS	hdr
Shutdowns: Notify the Commissioner at least 24 hours in advance of a planned shutdown, or as soon as possible after an unplanned shutdown of any process or control equipment, if the shutdown would cause an increase in the emission of any regulated air pollutant. At the time of notification, notify the Commissioner of the cause of the shutdown and the estimated duration. Notify the Commissioner again when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdowns: Notify the Commissioner within 24 hours after a breakdown of more than one hour duration of any process or control equipment if the breakdown causes an increase in the emission of any regulated air pollutant. At the time of notification or as soon thereafter as possible, the Permittee shall also notify the Commissioner of the cause of the breakdown and the estimated duration. Notify the Commissioner again when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Oral Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify orally or by facsimile the Commissioner or the state duty officer, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Written Notification of Deviations Endangering Human Health or the Environment: within two (2) working days after 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: cause of the deviation; exact dates of the period of the deviation; if the deviation has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Application for Permit Amendment: If you need a permit amendment, submit 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
Emission Fees: due 60 days after receipt of an MPCA bill	Minn. R. 7002.0005 through Minn. R. 7002.0095
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)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: GP 001 Baghouse Monitoring and Maintenance

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

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

What to do	Why to do it
Operation and Maintenance of Fabric Filter: The Permittee shall operate and maintain each fabric filter according to the control equipment manufacturer's specifications.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Visible Emissions/Pressure Drop Monitoring and Recordkeeping: Once each day of operation of any GP 001 fabric filter (CE 001/SV 001 and CE 002/SV 002), the Permittee shall check the outlet of each operating fabric filter during daylight hours for any visible emissions. If inclement weather prohibits a visible emission check, once each day the Permittee shall observe and record the pressure drop across each operating fabric filter. Record the time and date of the observation, and whether or not any visible emissions were observed or the pressure drop.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 5
Corrective Action: If visible emissions are observed, and/or if the pressure drop is outside the permitted range specified in this subject item, the Permittee shall follow the Operation and Maintenance Plan for the fabric filter and take corrective actions as soon as possible to eliminate the visible emissions and/or return the pressure drop to within the permitted range. The Permittee shall keep a record of the type and date of all corrective actions taken.	Title I Condition: To avoid major source classification under 40 CFR Section 52.2; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Inspect monthly, or as required by manufacturing specifications, all components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: GP 002 Scrubber Monitoring and Maintenance

Associated Items: CE 003 Packed-Gas Adsorption Column

CE 005 Packed-Gas Adsorption Column

What to do	Why to do it
Operation and Maintenance of Scrubber: The Permittee shall operate and maintain each scrubber according to the control equipment manufacturer's specifications.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Pressure Drop and Water Flow Rate Monitoring and Recordkeeping: Once each day of operation of any GP 002 scrubber (CE 003/SV 003 and CE 005/SV 007), the Permittee shall observe and record the pressure differential and water flow rate of each scrubber, and record the time and date of each observation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 5
Corrective Action: If the pressure drop is not within the prescribed range and/or the flow rate is not equal to or greater than the minimum value specified herein (see SV 003 and SV 007), the Permittee shall take corrective action as soon as possible to achieve the required operating values. The Permittee shall keep a record of the type and date of all corrective actions taken.	Title I Condition: Corrective action to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Calibrate the gauges annually, or as often as required by manufacturing specifications and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 2 and subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: GP 004 Tanks 1 and 3**Associated Items:** TK 001 190 Proof Ethanol (150.4 cu m)

TK 003 Denaturant (68.1 cu m)

What to do	Why to do it
Recordkeeping: Maintain records showing the dimensions of each tank and an analysis showing the tank capacity for TK 001 and TK 003.	40 CFR Section 60.116b(b); Minn. R. 7011.1520 (C)
Notification: Notify the Administrator within 30 days when the maximum true vapor pressure exceeds 27.6 kPa in TK 001.	40 CFR Section 60.116b(d); Minn. R. 7011.1520 (C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: GP 005 Tanks 2, 4, 5, and 6

- Associated Items:** TK 002 Denaturant (150.4 cu m)
 TK 004 200 proof Ethanol (454.3 cu m)
 TK 005 200 proof Ethanol (454.3 cu m)
 TK 006 Denatured Ethanol (1893 cu m)

What to do	Why to do it
A. POLLUTION CONTROL REQUIREMENTS	hdr
Each GP 005 storage vessel shall be equipped with a fixed roof in combination with an internal floating roof meeting the specifications of paragraph (a)(1) of this section.	40 CFR Section 60.112b(a); Minn. R. 7011.1520(C)
Internal Floating Roof Seal Requirement: Each internal roof shall be equipped with one of the closure devices between the wall of the storage vessel and the edge of the internal floating roof as described in Section 60.112b(a)(1)(ii).	40 CFR Section 60.112b(a)(1)(ii); Minn. R. 7011.1520(C)
B. MONITORING REQUIREMENTS	hdr
Inspection - Prior to Initial Fill of TK 002 and TK 006: Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with Volatile Organic Liquid (VOL). If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric, or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.	40 CFR Section 60.113b(a)(1); Minn. R. 7011.1520(C)
Inspection - Annual: Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every twelve (12) months after initial fill as required by Section 60.113b(a)(2).	40 CFR Section 60.113b(a)(2) and (4); Minn. R. 7011.1520(C)
Inspection - Tank Empty and Degassed: Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the tank is emptied and degassed as required by Section 60.113b(a)(4). In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years.	40 CFR Section 60.113b(a)(4) and (4); Minn. R. 7011.1520(C)
C. RECORDKEEPING REQUIREMENTS	hdr
Keep a record of each inspection performed as required by 40 CFR Section 60.113b(a). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).	40 CFR Section 60.115b(a)(2); Minn. R. 7011.1520(C)
Recordkeeping: Maintain records showing the dimensions of each tank and an analysis showing the tank capacity.	40 CFR Section 60.116b(b); Minn. R. 7011.1520 (C)
Recordkeeping: Maintain records of the VOL stored, the period of storage, and the maximum true vapor pressure of the VOL during the respective storage period, calculated as described in 40 CFR Section 60.116b(e).	40 CFR Section 60.116b(c); Minn. R. 7011.1520 (C)
D. REPORTING REQUIREMENTS	hdr
Notification: Notify the Administrator in writing at least 30 days prior to the filling or refilling of each tank for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the Permittee could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the tank. Notification shall be made by telephone followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.	40 CFR Section 60.113b(a)(5); Minn. R. 7011.1520(C)
After each inspection required by 40 CFR Section 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR Section 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within thirty (30) days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR Section 60.112b(a)(1) or 40 CFR Section 60.113b(a)(3)(ii) and list each repair made.	40 CFR Section 60.115b(a)(4); Minn. R. 7011.1520(C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Notification - Control Equipment Installation and Certification: After installing the internal floating roof in TK 002 and the fixed roof/internal floating roof combination in TK 006, furnish the Administrator with a report describing the control equipment (fixed roof/internal floating roof combination) and certifying that the control equipment meets the specifications of Sections 60.112b(a)(1) and 60.113b(a)(1). This report shall be attached to the initial startup notification required by Section 60.7(a)(3) and located in Table B of this permit.	40 CFR Section 60.115b(a)(1); Minn. R. 7011.1520(C)
Reporting - Annual Inspection Results: If any of the conditions described in Section 60.113b(a)(2) are detected during the annual visual inspection required by Section 60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the tank, the nature of the defects, and the date the tank was emptied or the nature of and date the repair was made.	40 CFR Section 60.115b(a)(3); Minn. R. 7011.1520(C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: GP 006 Fuel Requirements: Dryers, Boiler and thermal oxidizer

Associated Items: EU 013 DDGS Dryer #1 (SV 012)

EU 017 Boiler #1

EU 037 DDGS Dryer #2 (SV 012)

EU 042 TO/ Heat Recovery Boiler

What to do	Why to do it
These requirements satisfy the requirements of the Consent Decree para. 15(g)	hdr
Nitrogen Oxides: less than or equal to 41.7 tons/year based on a 52-week rolling sum.	Title I Condition: to avoid major source classification under 40 CFR 52.21 and 40 CFR Pt. 70 Consent Decree para. 23
Daily Recordkeeping: On each day of operation the Permittee shall calculate, record, and maintain a record of the total quantity of each fuel used in each item in this Group. This shall be based on written usage logs, flowmeters, or delivery records.	Title I Condition: to avoid major source classification under 40 CFR 52.21 and 40 CFR Pt. 70
<p>Weekly Recordkeeping -- NOx Emissions</p> <p>Monitor and record fuel type and usage for each emission unit in GP 006 on a weekly basis. Calculate NOx emissions weekly based on fuel usage and the latest stack test data.</p> <p>Calculate:</p> <p>1) The NOx emissions for the previous week using the daily fuel use records specified above.</p> <p>2) The weekly rolling sum NOx emissions for the previous 52-week period by summing the weekly NOx emissions data.</p>	Title I Condition: to avoid major source classification under 40 CFR 52.21 and 40 CFR Pt. 70
Fuel type: Natural gas and propane back-up only.	Title I Condition: to avoid major source classification under 40 CFR 52.21 and 40 CFR Pt. 70

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: GP 007 Facility Generators

- Associated Items:** EU 046 Office 25 KW Generator
 EU 047 Well House 375 KW Generator
 EU 048 Dryer 1300 KW Generator
 EU 049 Dryer #2 Load Generator
 EU 050 Boiler/Radial Feed 2000 KW Generator

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained. This limit applies individually to each emission unit in GP 007.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input for each emission unit in GP 007.	Minn. R. 7011.2300, subp. 2
Diesel Fuel Supplier Certification: The Permittee shall obtain a certification from the diesel fuel supplier for each fuel delivery, that specifies the percent sulfur by weight in the diesel fuel. All certifications shall be maintained for five years from the date of receipt. Note: Diesel fuel with a 0.49% sulfur content by weight will emit 0.50 lbs SO ₂ per MMBtu heat input.	Minn. R. 7007.0800, subp. 4 and 5
Fuel Usage: less than or equal to 49725 gallons/year using 12-month Rolling Sum for the total facility diesel fuel limit for all of the diesel generators on site.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21, 40 CFR Pt. 70, and Minn. R. 7007.0200.
Engine Generator Natural Gas Fuel Use Limits: All on-site diesel engine are limited to less than 90,000 cf per year. Any natural gas fueled engine generators installed at the AI-corn site are subject to the above limit. The Permittee may take the above usage limit into account when determining the type of permit amendment needed to install a natural gas fueled engine generator.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21, 40 CFR Pt. 70 and Minn. r. 7007.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: SV 001 (CE 001 fabric filter)

- Associated Items:** EU 001 Corn Dump Pit #1
 EU 002 Elevator
 EU 003 Scalper
 EU 004 Corn Bin
 EU 005 Corn Bin
 EU 006 Corn Bin
 EU 007 Corn Bin
 EU 014 DDGS Dump Pit
 EU 015 DDGS Elevator
 EU 016 DDGS Loadout (truck)
 EU 033 DDGS Loadout (railcar)
 EU 035 Corn Bin

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.08 grains/dry standard cubic foot of exhaust air, or the allowable concentration at the actual exhaust flow rate, as described in Minn. R. 7011.0735.	Minn. R. 7011.1005, subp. 3(D)
Opacity: less than or equal to 10 percent opacity	Minn. R. 7011.1005, subp. 3(D)
POLLUTION CONTROL REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 79.2 percent capture efficiency and collection efficiency combined for the dump pit, and combined efficiency of 19.8% for the DDGS handling. Potential PM emissions based on AP-42 emissions factors, 42.1 ton/hr corn throughput, and the above collection/capture efficiencies are 0.34 lb/hr.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; Minn. R. 7005.0100, subp. 35a
Particulate Matter < 10 micron: greater than or equal to 99 percent capture efficiency and collection efficiency combined for the dump pit, and combined efficiency of 19.8% for the DDGS handling. Potential PM10 emissions based on AP-42 emissions factors, 42.1 ton/hr corn throughput, and the above collection/capture efficiencies are 0.17 lb/hr.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7005.0100, subp. 35a
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 6 inches of water column for CE 001. See GP 001 for additional CE 001 requirements.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: SV 002 (CE 002 and CE007 fabric filter)

Associated Items: EU 008 Hammermill #1

EU 041 Hammermill #2

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot of exhaust air, or the allowable concentration at the actual exhaust flow rate, as described in Minn. R. 7011.0735.	Minn. R. 7011.1005, subp. 3(D)
Opacity: less than or equal to 10 percent opacity	Minn. R. 7011.1005, subp. 3(D)
POLLUTION CONTROL REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 99 percent collection efficiency . Potential PM emissions based on AP-42 emissions factors, 42.1 ton/hr corn throughput, and 99% collection efficiency are 0.44 lb/hr.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Particulate Matter < 10 micron: greater than or equal to 99 percent collection efficiency . Potential PM10 emissions based on AP-42 emissions factors, 42.1 ton/hr corn throughput, and 99% collection efficiency are 0.44 lb/hr.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: SV 003 (CE 003 fermentation scrubber)

- Associated Items:**
- EU 009 Fermenter #1
 - EU 010 Fermenter #2
 - EU 011 Fermenter #3
 - EU 012 Fermenter #4
 - EU 032 Process water, no emissions
 - EU 038 Fermenter
 - EU 039 Fermenter
 - EU 045 Fermenter
 - EU 052 Process Equipment Generator

What to do	Why to do it
EMISSION LIMITS	hdr
Volatile Organic Compounds: less than or equal to 7.7 lbs/hour as total mass VOC's.	Title I Condition: BACT - equivalent emission limit pursuant to consent decree entered into under 40 CFR Sec. 52.21 Consent Decree 15(b)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
TESTING REQUIREMENTS	hdr
Performance Test: due 180 days after Initial Startup of the expansion to measure SV 003 VOC emissions. Additional General Performance Test Requirements are listed in Table A in the Total Facility Section of this permit.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: SV 007 (CE 005 distillation scrubber)

- Associated Items:**
- EU 020 Slurry Tank
 - EU 021 Liquefaction Tank
 - EU 022 Liquefaction Tank
 - EU 023 Yeast Tank
 - EU 024 Side Stripper
 - EU 028 Molecular Sieve
 - EU 029 Evaporator
 - EU 043 Rectifier
 - EU 044 Beer Stripper

What to do	Why to do it
EMISSION LIMITS	hdr
Volatile Organic Compounds: less than or equal to 0.30 lbs/hour as total mass VOC's.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
TESTING REQUIREMENTS	hdr
Performance Test: due 180 days after Initial Startup of the expansion to measure SV 007 VOC emissions. Additional General Performance Test Requirements are listed in Table A in the Total Facility Section of this permit.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: SV 008 DDGS Cooling cyclone

Associated Items: EU 018 DDGS Cooling Cyclone

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 1.9 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Total Particulate Matter: less than or equal to 0.093 grains/dry standard cubic foot of exhaust air, or the allowable concentration at the actual exhaust flow rate, as described in Minn. R. 7011.0735.	Minn. R. 7011.1005, subp. 3(D)
Particulate Matter < 10 micron: less than or equal to 1.9 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Volatile Organic Compounds: less than or equal to 6.0 lbs/hour as total mass VOC's.	Title I Condition: BACT - equivalent emission limit pursuant to consent decree entered into under 40 CFR Sec. 52.21 Consent Decree para. 15(d) and (22)
Opacity: less than or equal to 10 percent opacity	Minn. R. 7011.1005, subp. 3(D)
TESTING REQUIREMENTS	hdr
Performance Test: due 180 days after Initial Startup of the expansion to measure SV 008 PM emissions. Additional General Performance Test Requirements are listed in Table A in the Total Facility Section of this permit.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test: due 180 days after permit issuance to measure SV 008 PM10 emissions. Additional General Performance Test Requirements are listed in Table A in the Total Facility Section of this permit.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Sections 52.21 and 70.2; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: SV 012 (CE 004 and CE 006 multiple cyclone - oxidizer)

Associated Items: EU 013 DDGS Dryer #1 (SV 012)

EU 037 DDGS Dryer #2 (SV 012)

EU 042 TO/ Heat Recovery Boiler

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 9.5 lbs/hour	Title I Condition: BACT - equivalent emission limit pursuant to consent decree entered into under 40 CFR Sec. 52.21 Consent Decree 15(a) and (24)
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0610, subp. 1(A)(1)
Particulate Matter < 10 micron: less than or equal to 9.5 lbs/hour	Title I Condition: BACT - equivalent emission limit pursuant to consent decree entered into under 40 CFR Sec. 52.21 Consent Decree 15(a) and (24)
Volatile Organic Compounds: less than or equal to 1.5 lbs/hour as total mass VOC's.	Title I Condition: BACT - equivalent emission limit pursuant to consent decree entered into under 40 CFR Sec. 52.21 Consent Decree 15(a)
Carbon Monoxide: less than or equal to 15.8 lbs/hour	Title I Condition: BACT - equivalent emission limit pursuant to consent decree entered into under 40 CFR Sec. 52.21 Consent Decree 15(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. 7011.0610, subp. 1(A)(2)
TESTING REQUIREMENTS	hdr
Performance Test: due 180 days after Initial Startup of the thermal oxidizer to measure SV 012 PM10 and VOC emissions, and to verify the NOx emission factor while combusting natural gas (9.00 E-05 lb/cu ft of natural gas at 1050 Btu/cu. ft.) Testing shall be conducted while both dryers are operating. Additional General Performance Test Requirements are listed in Table A in the Total Facility Section of this permit.	Title I Condition: Emissions testing for BACT - equivalent emission limit under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1 Consent Decree para. 6, 7, and 28
Performance Test: due 180 days after Initial Startup of the thermal oxidizer to measure SV 012 PM emissions. Testing shall be conducted while both dryers are operating. Additional General Performance Test Requirements are listed in Table A in the Total Facility Section of this permit.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test: due 180 days after Initial Startup of the thermal oxidizer to measure SV 012 opacity.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: EU 017 Boiler #1**Associated Items:** GP 006 Fuel Requirements: Dryers, Boiler and thermal oxidizer
SV 005 Boiler #1

What to do	Why to do it
Operating Hours: less than or equal to 7500 hours/year using 12-month Rolling Sum	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 2
Install a low-NOx burner on Boiler no. 1.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 2 Consent Decree para. 15(c)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: EU 018 DDGS Cooling Cyclone

Associated Items: SV 008 DDGS Cooling cyclone

What to do	Why to do it
Pressure Drop: greater than or equal to 2 inches of water column and less than or equal to 8 inches of water column for EU 018.	Title I Condition: Equipment operating parameter to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Record pressure drop once each day of operation.	Title I Condition: Monitoring of equipment operating parameter to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Corrective Action: If the pressure drop is not in the range of values specified herein, the Permittee shall take corrective action as soon as possible to return the pressure drop to within the required operating values. The Permittee shall keep a record of the type and date of all corrective actions taken.	Title I Condition: Corrective action to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Calibrate the pressure gauge annually, or as often as required by manufacturing specifications and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 2 and subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: EU 042 TO/ Heat Recovery Boiler

Associated Items: GP 006 Fuel Requirements: Dryers, Boiler and thermal oxidizer

SV 012 (CE 004 and CE 006 multiple cyclone - oxidizer)

What to do	Why to do it
<p>Temperature: greater than or equal to 1436 degrees F using 3-hour Average at the combustion chamber unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the average temperature recorded during the most recent MPCA approved performance test where compliance for VOC emissions was demonstrated. If the three-hour rolling average temperature drops below the minimum temperature limit, the VOC used during that time shall be considered uncontrolled until the average minimum temperature limit is once again achieved. This shall be reported as a deviation.</p>	<p>Title I Condition: to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Carbon Monoxide: greater than or equal to 90.0 percent control efficiency or less than or equal to 100 parts per million.</p>	<p>Title I Condition: to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Volatile Organic Compounds: less than or equal to 95.0 percent control efficiency or less than or equal to 10 parts per million.</p>	<p>Title I Condition: to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>The Permittee shall operate and maintain the thermal oxidizer any time that any process equipment controlled by the thermal oxidizer is in operation.</p>	<p>Title I Condition: to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Quarterly Inspections: At least once per calendar quarter, the Permittee shall inspect the control equipment internal and external system components, including but not limited to the refractory, heat exchanger, and electrical systems. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.</p> <p>The Permittee shall inspect the control equipment internal components during all planned shutdowns and not less than annually, including, but not limited to, the refractory.</p>	<p>Minn. R. 7007.0800, subp. 4, 5, and 14</p>
<p>Corrective Actions: If the temperature is below the minimum specified by this permit or if the thermal oxidizer or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall return the temperature to at least the permitted minimum and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the thermal oxidizer. The Permittee shall keep a record of the type and date of any corrective action taken.</p>	<p>Minn. R. 7007.0800, subp. 4, 5, and 14</p>
<p>The Permittee shall operate and maintain the thermal oxidizer in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.</p>	<p>Minn. R. 7007.0800, subp. 14</p>
<p>MONITORING REQUIREMENTS</p>	<p>hdr</p>
<p>Monitoring Equipment: The Permittee shall install and maintain thermocouples to conduct temperature monitoring required by this permit. The monitoring equipment must be installed, in use, and properly maintained whenever operation of the monitored control equipment is required.</p>	<p>Minn. R. 7007.0800, subp. 4</p>
<p>The Permittee shall maintain a continuous hard copy readout or computer disk file of the temperature readings and calculated three hour rolling average temperatures for the combustion chamber.</p>	<p>Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Daily Monitoring: The Permittee shall physically verify the operation of the temperature recording device at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Annual Calibration: The Permittee shall calibrate the temperature monitor at least annually and shall maintain a written record of the calibration and any action resulting from the calibration.</p>	<p>Minn. R. 7007.0800, subp. 4, 5, and 14</p>
<p>The Permittee shall maintain and operate a thermocouple monitoring device that continuously indicates and records the combustion chamber temperature of the thermal oxidizer. The monitoring device shall have a margin of error less than the greater of +/- 0.75 percent of the temperature being measured or +/- 2.5 degrees Celsius. The recording device shall also calculate the three-hour rolling average combustion chamber temperature.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>
<p>RECORDKEEPING AND REPORTING</p>	<p>hdr</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 009

Recordkeeping: Record and maintain records of the amount of fuel combusted on a monthly basis. These records may consist of purchase records or receipts.	40 CFR Section 60.48(g) and (j); February 20, 1992, EPA Memorandum
Fuel Burned: natural gas only	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

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

Associated Items: EU 008 Hammermill #1

GP 001 Baghouse Monitoring and Maintenance

What to do	Why to do it
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 8 inches of water column for CE 002. See GP 001 for additional CE 002 requirements.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 4 and 5
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: CE 003 Packed-Gas Adsorption Column

- Associated Items:** EU 009 Fermenter #1
 EU 010 Fermenter #2
 EU 011 Fermenter #3
 EU 012 Fermenter #4
 EU 038 Fermenter
 EU 039 Fermenter
 EU 045 Fermenter
 EU 052 Process Equipment Generator
 GP 002 Scrubber Monitoring and Maintenance

What to do	Why to do it
Volatile Organic Compounds: greater than or equal to 95.0 percent control efficiency or less than or equal to 20 parts per million if the inlet concentration is less than 200 parts per million. (See GP 002 for CE 003 monitoring and maintenance requirements).	Title I Condition: BACT - equivalent emission limit pursuant to consent decree entered into under 40 CFR Sec. 52.21 Consent Decree 15(b)
Pressure Drop: greater than or equal to 2 inches of water column and less than or equal to 10 inches of water column for CE 003.	Title I Condition: Equipment operating parameter to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Water flow rate: greater than or equal to 20.0 gallons/minute (CE 003 inlet water flow rate) or as determined by the post-expansion performance testing.	Title I Condition: Equipment operating parameter to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: CE 004 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

Associated Items: EU 013 DDGS Dryer #1 (SV 012)

EU 037 DDGS Dryer #2 (SV 012)

What to do	Why to do it
Total Particulate Matter: greater than or equal to 80 percent control efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Particulate Matter < 10 micron: greater than or equal to 80 percent control efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Pressure Drop: greater than or equal to 2 inches of water column and less than or equal to 8 inches of water column	Title I Condition: Equipment operating parameter to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Record pressure drop once each day of operation.	Title I Condition: Monitoring of equipment operating parameter to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Corrective Action: If the pressure drop is not in the range of values specified herein, the Permittee shall take corrective action as soon as possible to return the pressure drop to within the required operating values. The Permittee shall keep a record of the type and date of all corrective actions taken.	Title I Condition: Corrective action to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Calibrate the pressure gauge annually, or as often as required by manufacturing specifications and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 2 and subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: CE 005 Packed-Gas Adsorption Column

- Associated Items:** EU 020 Slurry Tank
 EU 021 Liquefaction Tank
 EU 022 Liquefaction Tank
 EU 023 Yeast Tank
 EU 024 Side Stripper
 EU 029 Evaporator
 EU 043 Rectifier
 EU 044 Beer Stripper
 GP 002 Scrubber Monitoring and Maintenance

What to do	Why to do it
Volatile Organic Compounds: greater than or equal to 94.2 percent control efficiency or less than or equal to 20 parts per million if the inlet concentration is less than 200 parts per million. (See GP 002 for CE 005 monitoring and maintenance requirements).	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Pressure Drop: greater than or equal to 2 inches of water column and less than or equal to 10 inches of water column for CE 005.	Title I Condition: Equipment operating parameter to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Water flow rate: greater than or equal to 3.25 gallons/minute (CE 005 inlet water flow rate)	Title I Condition: Equipment operating parameter to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: CE 006 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

Associated Items: EU 013 DDGS Dryer #1 (SV 012)

EU 037 DDGS Dryer #2 (SV 012)

What to do	Why to do it
Total Particulate Matter: greater than or equal to 80 percent control efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Particulate Matter < 10 micron: greater than or equal to 80 percent control efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Pressure Drop: greater than or equal to 2 inches of water column and less than or equal to 8 inches of water column	Title I Condition: Equipment operating parameter to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Record pressure drop once each day of operation.	Title I Condition: Monitoring of equipment operating parameter to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Corrective Action: If the pressure drop is not in the range of values specified herein, the Permittee shall take corrective action as soon as possible to return the pressure drop to within the required operating values. The Permittee shall keep a record of the type and date of all corrective actions taken.	Title I Condition: Corrective action to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Calibrate the pressure gauge annually, or as often as required by manufacturing specifications and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 2 and subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

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

Associated Items: EU 041 Hammermill #2

What to do	Why to do it
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 8 inches of water column for CE 002. See GP 001 for additional CE 002 requirements.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 4 and 5
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: CE 008 Ethanol Loading Rack Flare

What to do	Why to do it
EMISSION LIMITS	hdr
Opacity: less than or equal to 0 percent opacity except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.	Title I Condition: BACT - equivalent emission limit pursuant to consent decree entered into under 40 CFR Sec. 52.21 Consent Decree 15(f) and 21
OPERATING REQUIREMENTS	hdr
Fuel usage: The flare shall be used only when the net heating value of the gas being combusted is 300 Btu/scf or greater if the flare is steam-assisted or air-assisted; or 200 Btu/scf or greater if the flare is non-assisted.	Minn. R. 7007.0800, subp. 2
The flare shall be operated at all times when emissions may be vented to it.	Minn. R. 7007.0800, subp. 2
The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: FS 001 Ethanol Loadout

What to do	Why to do it
All loadout emissions from all vehicles loaded at the Ethanol Loadout area will be collected and routed to the Ethanol Loading Rack Flare (CE008). All railcars shall be designated as ethanol only.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: FS 002 Truck Traffic on Paved Roads

What to do	Why to do it
Fugitive emissions: Do not cause or permit the transporting of any material in a manner which may allow avoidable amounts of particulate matter to be come airborne. Do not cause or permit a road or a driveway to be constructed, used, repaired, or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne.	Minn. R. 7011.0150

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: FS 003 Uncaptured Grain and DDGS

What to do	Why to do it
Clean up commodities (corn and/or DDGS) 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 5 percent opacity for fugitive emissions from truck unloading of grain, or grain and DDGS handling and rail loading activities.	Minn. R. 7011.1005, subp. 3(A)
Opacity: less than or equal to 10 percent opacity for fugitive emissions from DDGS truck loading.	Minn. R. 7011.1005, subp. 3(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 009

Subject Item: FS 004 Valves, Flanges, and Seals (tank leaks)

What to do	Why to do it
A. STANDARDS: PUMPS	hdr
<p>Pumps in light liquid service:</p> <p>(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b), except as provide in 40 CFR 60.482-1(c) and paragraphs (d), (e), and (f).</p> <p>(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal</p>	40 CFR 60.482-2
<p>(b)(1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.</p> <p>(2) If there are indications of liquids dripping from the pump seal, a leak is detected.</p> <p>(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9.</p> <p>(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.</p>	40 CFR 60.482-2(b) and (c)
B. STANDARDS: COMPRESSORS	hdr
<p>(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in 40 CFR 60.482-1(c) and 40 CFR 60.482-3(h) and (i).</p>	40 CFR 60.482-3(a)
<p>(b) Each compressor seal system shall be:</p> <p>(1) operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or</p> <p>(2) Equipped with a barrier fluid system that is connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or</p> <p>(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.</p>	40 CFR 60.482-3(b)
<p>(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.</p> <p>(d) Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.</p>	40 CFR 60.482-3(c) and (d)
<p>(e) (1) Each sensor shall be checked daily or shall be equipped with an audible alarm.</p> <p>(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.</p>	40 CFR 60.482-3(e)
<p>(f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2), a leak is detected.</p>	40 CFR 60.482-3(f)
<p>(g) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected except as proved in 40 CFR 60.482-9 (delay of repair)</p> <p>(2) A first attempt at repair shall be made no later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9.</p>	40 CFR 60.482-3(g)
C. STANDARDS: PRESSURE RELIEF DEVICES IN GAS/VAPOR SERVICE	hdr
<p>(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background as determined by the methods specified in 40 CFR 60.485(c).</p>	40 CFR 60.482-4(a)
<p>(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in 40 CFR 60.482-9.</p> <p>(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in 40 CFR 60.485(c).</p>	40 CFR 60.482-4(b)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

D. STANDARDS: SAMPLING CONNECTION SYSTEMS	hdr
(a) Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system, except as provided in 40 CFR 60.482-1(c).	40 CFR 60.482-5(a)
(b) Each closed-purge, closed-loop, or closed-vent system shall: (1) Return the purged process fluid directly to the process line; or (2) Collect and recycle the purged process fluid to a process; or (3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of 40 CFR 60.482-10.	40 CFR 60.482-5(b) and (c)
(c) In situ sampling systems are exempt from these requirements.	
E. STANDARDS: OPEN ENDED VALVES OR LINES	hdr
(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 60.482-1(c).	40 CFR 60.482-6(a)
(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.	
(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.	40 CFR 60.482-6(b) and (c)
(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) at all other times.	
F. STANDARDS: VALVES	hdr
(a) Each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b).	40 CFR 60.482-7(a)
(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	40 CFR 60.482-7(b) and (c)
(c)(1) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.	
(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.	
(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provide in 40 CFR 60.482-9.	40 CFR 60.482-7(d)
(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.	
(e) First attempts at repair include, but are not limited to, the following best practices where practicable: (1) Tightening of bonnet bolts; (2) Replacement of bonnet bolts; (3) Tightening of packing gland nuts; (4) Injection of lubricant into lubricated packing	40 CFR 60.482-7(e)
G. STANDARDS: PUMPS AND VALVES IN HEAVY LIQUID SERVICE, PRESSURE RELIEF DEVICES IN LIGHT LIQUID OR HEAVY LIQUID SERVICE, AND FLANGES AND OTHER CONNECTORS.	hdr
(a) Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service and flanges and other connectors shall be monitored within 5 days by the method specified in 40 CFR 60.485(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.	40 CFR 60.482-8(a)
(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	40 CFR 60.482-8(b) and (c)
(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9 (delay of repair).	
(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.	
(d) First attempts at repair include, but are not limited to, the best practices described under 40 CFR 60.482-7(e).	40 CFR 60.482-8(d)
H. DELAY OF REPAIR	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

(a) Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.	40 CFR 60.482-9(a) and (b)
(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.	
(c) Delay of repair for valves will be allowed if: (1) The owner or operator demonstrates that emissions of purged material resulting from the immediate repair are greater than the fugitive emissions likely to result from delay of repair, and (2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10	40 CFR 60.482-9(c)
(d) Delay of repair for pumps will be allowed if: (1) Repair required the use of a dual mechanical seal system that includes a barrier fluid system, and (2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.	40 CFR 60.482-9(d)
(e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.	40 CFR 60.482-9(e)
I. TESTING PROCEDURES	hdr
Compliance shall be determined by the methods specified in 40 CFR 60.485.	40 CFR 60.485
J. RECORDKEEPING	hdr
(b) When each leak is detected, the following requirements apply: (1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. (2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7(c) and no leak has been detected during those 2 months. (3) The identification on equipment except on a valve, may be removed after it has been repaired.	40 CFR 60.486(b)
(c) When each leak is detected the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location: (1) The instrument and operator identification numbers and the equipment identification number. (2) The date the leak was detected and the dates of each attempt to repair the leak. (3) Repair methods applied in each attempt to repair the leak. (4) Above 10,000 is the maximum instrument reading measured by the methods specified in 40 CFR 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.	40 CFR 60.486(c)(1) - (4)
(5) Repair delayed and the reason for the delay if a leak is not repaired within 15 calendar days after discover of the leak. (6) The signature of the owner or operator whose decision it was that the repair could not be effected without a process shutdown. (7) The expected date of successful repair of the leak if a leak is not repaired within 15 days. (8) Dates of process unit shutdown that occur while the equipment is unrepaired. (9) The date of successful repair of the leak.	40 CFR 60.486(c)(5) - (9)
K. REPORTING REQUIREMENTS	hdr
(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning six months after the initial startup date.	40 CFR 60.487(a)
(b) The initial semiannual report to the Administrator shall include the following information: (1) Process unit identification, (2) Number of valves subject to the requirements of 40 CFR 60.482-7, (3) Number of pumps subject to the requirements of 40 CFR 60.482-2, (4) Number of compressors subject to the requirements of 40 CFR 60.482-3	40 CFR 60.487(b)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/10/05

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 009

<p>(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in 40 CFR 60.486;</p> <p>(1) Process unit identification. (2) For each month during the semiannual reporting period, (i) Number of valves for which leaks were detected as described in 40 CFR 60.482(7)(b) or 40 CFR 60.483-2 (ii) Number of valves for which leaks were not repaired as required in 40 CFR 60.482-7(d)(1), (iii) Number of pumps for which leaks were detected as described in 40 CFR 60.482-2(b) and (d)(6)(i), (iv) Number of pumps for which leaks were not repaired as required in 40 CFR 60.482-2(c)(1) and (d)(6)(ii),</p>	<p>40 CFR 60.487(c)(1) and (2)(i) - (2)(iv)</p>
<p>(v) Number of compressors for which leaks were detected as described in 40 CFR 60.482-3(f), (vi) Number of compressors for which leaks were not repaired as required in 40 CFR 60.482-3(g)(1) (vii) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.</p>	<p>40 CFR 60.487(c)(2)(v) - (vii)</p>
<p>(3) Dates of process unit shutdowns which occurred within the semiannual reporting period. (4) Revisions to items reported according to paragraph (b) if changes have occurred since the initial report or subsequent revisions to the initial report.</p>	<p>40 CFR 60.487(c)(3) and (4)</p>
<p>(e) Report the results of all performance tests in accordance with 40 CFR 60.8. The provisions of 40 CFR 60.8(d) do not apply to affected facilities subject to the provisions of this subpart except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.</p>	<p>40 CFR 60.487(e)</p>

TABLE B: SUBMITTALS

11/22/04

Facility Name: Grand Marais Public Utilities Commission
Permit Number: 03100008 - 002

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: RECURRENT SUBMITTALS

11/22/04

Facility Name: Grand Marais Public Utilities Commission

Permit Number: 03100008 - 002

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

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 03100008-002

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

1. General Information

1.1. Applicant and Stationary Source Location:

Stationary Source/Address (SIC Code: 4911)
Grand Marais Public Utilities Commission 61 Lupin Lane, Grand Marais, MN Cook County
Contact: Steve DuChien Phone: (218) 387-1848

1.2. Description of the Permit Action

This facility received an Option D permit in 2003, and the Permittee needed to increase operating hours of internal combustion diesel generators (engines), which necessitated this permit action.

1.3 Description of any Changes Allowed with this Permit Issuance

No physical changes are allowed with this permit action.

1.4 Description of All Amendments Issued Since Last Total Facility Permit Issuance:

None

1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary (assuming 1350 hours a year)

Pollutant	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Limited Potential Emissions	0.54	0.54	7.51	93.0	5.31	2.38	0.05	0.14

Table 2. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		X	
Part 70 Permit Program		X	
Part 63 NESHAP			X

2. Regulatory and/or Statutory Basis

New Source Review

The facility is an existing non-major source under New Source Review regulations. No changes are authorized by this permit.

Part 70 Permit Program

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

New Source Performance Standards (NSPS)

There are no New Source Performance Standards applicable to the operations at this facility.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility has accepted limits on HAP usage such that it is a non-major source under 40 CFR pt. 63. Thus, no NESHAPs apply.

Minnesota State Rules

Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines

Table 3. Regulatory Overview of Facility

Group	Applicable Regulations	Comments:
GP 001	40 CFR Section 52.21 and 40 CFR Section 70.2	Title I Condition Nitrogen Oxides: less than or equal to 93.0 tons/year
GP 001	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines; limits sulfur content of fuel and Opacity
GP 001	40 CFR Section 72.6(b)(9)	New Utility Unit – Acid Rain Exemption
TK 001	40 CFR Section 60.116b(b), and Minn. R. 7011.1505, subp. 3(B)	NSPS Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification

		Commenced After July 23, 1984. Minnesota Standards of Performance for Storage Vessels - Post-June 11, 1973. Recordkeeping of tank dimensions and capacity.
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3. Technical Information

Calculations of Potential to Emit: See emission calculations and other pertinent information enclosed.

EAW/EIS Applicability: Not Applicable

NSPS: These diesel generators are not subject to any New Source Performance Standards

Minnesota Standards of Performance: Standards of Performance for Stationary Internal Combustion Engines

CAM: These generators do not have any pollution control equipment; hence, CAM not applicable.

NESHAPs: This facility is a non-major source of HAPs and therefore, not subject to any MACT standards.

112(g) Applicability: Not applicable.

Periodic Monitoring

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

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

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

Table 4. Periodic Monitoring

Group	Emission Limit	Additional Monitoring	Discussion
GP 001	NOx limit <= 93.0 tpy, calculated as a 12-month rolling sum.	None	Records during operation of diesel generators: Fuel usage

Insignificant Activities: None

Permit Organization: Meets Delta general guidance

Modeling Review: The Permittee conducted Screen Modeling for Ambient Air Impacts for diesel fuel in each engine, as they are used for peaking purposes. Modeled ambient air impacts are considerably below target levels - Dennis Becker reviewed the modeling part of permit application to see that the information is accurate.

Comments Received

Public Notice Period: 10/19/2004 – 11/17/2004

No comments were received from the public during the public notice period.

4. Conclusion

Based on the information provided by Grand Marais Public Utilities Commission, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 03100008-002 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: John Chikkala (permit engineer)
 Bob Beresford (enforcement)
 Paula Connell (peer reviewer)

Attachments: 1. PTE Summary and Calculation Forms
 2. Final permit