

AIR EMISSION PERMIT NO. 03900028-007

IS ISSUED TO

Al-Corn Clean Fuel

Al-Corn Clean Fuel
West Highway 14
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Major Amendment		withdrawn	005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	See below	007

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

Permit Type: State; Syn Min Part 70

Issue Date: April 19, 2002

Expiration: Permit Does Not Expire
All Title I Conditions do not expire.

Ann M. Foss
Major Facilities Section Manager
Majors and Remediation Division

for Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

JR:lh

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NOTICE TO THE PERMITTEE:

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

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

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

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

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Certain requirements, which have been determined not to apply, are listed in Table A of this permit.

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 credible evidence to establish compliance or noncompliance with applicable requirements.

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

FACILITY DESCRIPTION:

Al-Corn Clean Fuel is a fuel alcohol 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. A by-product of the ethanol process is dry distillers grain with solubles (DDGS) which is used as livestock feed. A bushel of corn will yield about 18 pounds of DDGS.

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).

AMENDMENT (ACTION 002)

This amendment authorized the installation of a new beer well and the conversion of an existing beer well into a fourth fermentation tank.

AMENDMENT (ACTION 003)

No physical modifications were authorized by this permit amendment. The permit authorized a change in the pressure drop range for CE 004. In addition, some of the control equipment and tanks requirements were rearranged into “groups” to shorten the permit and make its format consistent with other ethanol plant permits.

AMENDMENT (ACTION 004)

This permit amendment increased the total facility ethanol production limit from 14.5 mmgal/yr to 19.25 mmgal/yr. In addition, the permit amendment changed the emission limits for fermentation, DDGS drying, distillation, and DDGS cooling. The permit also allowed the facility to install a 29 mmBtu/hr natural gas and propane-fired boiler, and established a 12-month rolling sum propane usage limit. The total facility emissions continued to remain below major source levels as defined under 40 CFR 52.21 and 40 CFR 70.2.

AMENDMENT (ACTION 005)

Withdrawn.

AMENDMENT (ACTION 006)

Al-Corn proposed to increase production from 19.25 mmgal/yr to 30 mmgal/yr. Additional equipment was added, some of the emission limits were changed, and the requirements of 40 CFR Part 60, Subp. VV were inserted for the distillation/fermentation equipment VOC leaks. The insertion of the VV requirements was done in response to a policy change by EPA.

CURRENT AMENDMENT (ACTION 007)

Al-Corn submitted a written notification to the MPCA dated October 17, 2001. Al-Corn intended that the notification be for control equipment. There was some increase in potential emissions of some pollutants, as calculated by Al-Corn, but the increases were well below the minor modification threshold.

Like the existing boilers and dryers, the new thermal oxidizer will be capable of burning both propane and natural gas. The facility's minor source status relies, in part, on a propane use limit to restrict potential NO_x emissions at the site to less than major source thresholds as defined by 40 CFR 52.21 and 40 CFR Pt. 70. Unfortunately, the propane use limit was set for dryers and boilers in GP006 in the permit. GP006 is defined as Dryers 1 and 2, and Boilers 1 and 2. Though it is unclear, one could argue that the propane use limit does not apply to the new thermal oxidizer. One could also argue that since the permit does not require the removal of Boiler 2, its emissions should still be counted when calculating the facility's potential emissions.

Without the propane use limit, the potential NO_x emissions increase from the thermal oxidizer would be about 74 tons per year.

To make the limits clear, and enforceable, this permit is being issued with a propane limit set at the total facility level. This allows Al-Corn to add combustion units in the future and use the limit in calculating emission increases from the modification. The fuel use limit for the diesel generators has been changed to the total facility level as well, to allow for the same flexibility.

Al-Corn is also adding a second baghouse on its hammermill system, has begun using a beerwell as a process water storage tank, and has added a larger beerwell. The beerwell initially permitted was not large enough for the batch process. Emissions are based on throughput, which will not change. There is therefore, no emissions change associated with using a larger beerwell. Stack emissions testing has been conducted. Emissions from the fermentation scrubber are about an order of magnitude lower than the emission limit.

Also changed was the NO_x emission factor for the dryers. In a previous permit, Al-Corn had asked to use an emission factor of 7E-5 lb/cf. Stack testing was required to verify that factor. Since then, Al-Corn has received information from the manufacturer that indicates that emissions will be almost 9E-5 lb/cf. Al-Corn has asked for this change in factor, used in calculating its potential NO_x emissions. This permit requires stack emissions testing that will verify that the NO_x emission rate when burning natural gas from the dryers and thermal oxidizer is less than 9E-5 lb/cf.

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/19/02

Facility Name: Al-Corn Clean Fuel
 Permit Number: 03900028 - 007

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
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.	Minn. R. 7007.1800 (C)(2)
A. PRODUCTION, OPERATING, AND PERFORMANCE TEST REQUIREMENTS	hdr
Production: less than or equal to 30000000 gallons/year using 12-month Rolling Sum of ethanol (200-proof, prior to addition of denaturant).	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
Fuel Usage: less than or equal to 511475 gallons/year using 12-month Rolling Sum of propane	Title I Condition: To avoid major source classification under 40 CFR Section 52.21, 40 CFR Section 70.2, and Minn. R. 7007.0200
Fuel Usage: less than or equal to 49,725 gallons/year using 12-month Rolling Sum of diesel fuel, at any diesel generator on site and 90,000 cf per year of natural gas total, for all 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.
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment.	Minn. R. 7007.0800, subp. 14 and 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)
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
B. 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)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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) separately record the amounts of each fuel combusted on site during the previous calendar month; 2) calculate total propane usage for the previous month and 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 Sections 52.21 and 70.2; 40 CFR Section 60.13(i) and February 20, 1992, EPA memorandum to meet requirements of 40 CFR Sections 60.48c(g) and (i); Minn. R. 7007.0800, subp. 5
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
C. 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)
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)
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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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

04/19/02

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 007

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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

Subject Item: GP 007 Emergency Generators

- Associated Items:** EU 046 Office 25 KW Generator
 EU 047 Well House 375 KW Generator
 EU 048 Dryer 1300 KW Generator
 EU 049 Process Equip 1300 KW 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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
 EU 036 Corn Bin
 EU 051 Corn Dump Pit #2

What to do	Why to do it
A. 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)
B. 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, 36.76 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 collection 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, 36.76 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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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
A. 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)
B. 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, 36.76 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, 36.76 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
Pressure Drop: greater than or equal to 2 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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 Beer Well

What to do	Why to do it
A. EMISSION LIMITS	hdr
Volatile Organic Compounds: less than or equal to 7.0 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
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
B. POLLUTION CONTROL REQUIREMENTS	hdr
Volatile Organic Compounds: greater than or equal to 96.5 percent control efficiency (See GP 002 for CE 003 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 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 11.7 gallons/minute (CE 003 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
C. 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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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
A. EMISSION LIMITS	hdr
Volatile Organic Compounds: less than or equal to 1.94 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
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
B. POLLUTION CONTROL REQUIREMENTS	hdr
Volatile Organic Compounds: greater than or equal to 94.2 percent control efficiency (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
C. 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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

Subject Item: SV 008 DDGS Cooling cyclone

Associated Items: EU 018 DDGS Cooling Cyclone

What to do	Why to do it
A. 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
Opacity: less than or equal to 10 percent opacity	Minn. R. 7011.1005, subp. 3(D)
B. EMISSION UNIT OPERATING REQUIREMENTS	hdr
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
C. 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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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)

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 15.0 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Total Particulate Matter: less than or equal to 0.3 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 15.0 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
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)
Volatile Organic Compounds: less than or equal to 7.90 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
B. POLLUTION CONTROL REQUIREMENTS	hdr
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
C. 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 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
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/19/02

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 007

Performance Test: due 180 days after Initial Startup of the thermal oxidizer to measure SV 012 opacity.	Minn. R. 7017.2020, subp. 1
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TABLE A: LIMITS AND OTHER REQUIREMENTS

04/19/02

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 007

Subject Item: EU 042 Boiler #2**Associated Items:** GP 006 Fuel Requirements: Dryers and Boilers

What to do	Why to do it
This boiler shall not operate, and shall be rendered inoperable, after the installation and successful operation of the thermal oxidizer installed to control the dryer emissions.	Title I Condition: restriction taken to avoid major source classification under 40 CFR 52.21 and 40 CFR 70.2

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

Subject Item: CE 006 Chemical Oxidation

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

EU 037 DDGS Dryer #2 (SV 012)

GP 006 Fuel Requirements: Dryers and Boilers

What to do	Why to do it
POLLUTION CONTROL EQUIPMENT OPERATION AND MAINTENANCE	hdr
Temperature: greater than or equal to 1300 degrees F	Title I Condition: Operating parameter to avoid major source status under 40 CFR 52.21 and 40 CFR Part 70
Record temperature continuously.	Title I Condition: Monitoring of operating parameter to avoid major source status under 40 CFR 52.21 and 40 CFR Part 70
Corrective Action: If the temperature is not within the range of values specified herein, the Permittee shall take corrective action as soon as possible to return the temperature to within the required operating value. The Permittee shall keep a record of the type and date of all corrective actions taken.	Title I Condition: Corrective action taken for parameter to avoid major source status under 40 CFR 52.21 and 40 CFR Part 70
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 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 14
Calibrate the temperature measurement device 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 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/19/02

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 007

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 become 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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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

04/19/02

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 007

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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

(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

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

<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

04/19/02

Facility Name: AI-Corn Clean Fuel
Permit Number: 03900028 - 007

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

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

Send any application for a permit or permit amendment to:

Permit Technical Advisor
Permit Section
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

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

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

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

Supervisor
Compliance Determination Unit
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

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

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

04/19/02

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 007

What to send	When to send	Portion of Facility Affected
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of the expansion.	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of the thermal oxidizer.	SV012
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of TK 002 and TK 006. This notification shall have attached the 'Notification - Control Equipment Installation and Certification' as described in the GP 005 Reporting Requirements in Table A.	GP005
Notification of the Date Construction Began	due 30 days after Start Of Construction and Modification of TK 006 and TK 002, respectively. Submit the name and number of each affected tank and the date construction of TK 006 began, and the date that modification of TK 002 began.	GP005
Testing Frequency Plan	due 60 days after Performance Test for SV 003 VOC emissions. The plan shall specify a testing frequency using the test data and MPCA guidance. Future performance tests based on year (12-month), 36-month, and 60-month intervals, or as applicable, shall be required on written approval of MPCA per Minn. R. 7017.2020, subp. 1.	SV003
Testing Frequency Plan	due 60 days after Performance Test for SV 007 VOC emissions. The plan shall specify a testing frequency using the test data and MPCA guidance. Future performance tests based on year (12-month), 36-month, and 60-month intervals, or as applicable, shall be required on written approval of MPCA per Minn. R. 7017.2020, subp. 1.	SV007
Testing Frequency Plan	due 60 days after Performance Test for SV 008 PM and PM10 emissions. The plan shall specify a testing frequency using the test data and MPCA guidance. Future performance tests based on year (12-month), 36-month, and 60-month intervals, or as applicable, shall be required on written approval of MPCA per Minn. R. 7017.2020, subp. 1.	SV008
Testing Frequency Plan	due 60 days after Performance Test for SV 012 PM, PM10, and VOC emissions, the Natural Gas NOx emission factor verification, and opacity. The plan shall specify a testing frequency using the test data and MPCA guidance. Future performance tests based on year (12-month), 36-month, and 60-month intervals, or as applicable, shall be required on written approval of MPCA per Minn. R. 7017.2020, subp. 1.	SV012

TABLE B: RECURRENT SUBMITTALS

04/19/02

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 007

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Initial Startup of the facility. The first report covers January 1st through June 30th. The second report covers July 1st through December 31st.	Total Facility
Compliance Certification	due 30 days after end of each calendar year following Initial Startup of the facility. The report covers all deviations experienced during the calendar year.	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year starting 04/29/1996 (April 1). To be submitted on a form approved by the Commissioner	Total Facility

TECHNICAL SUPPORT DOCUMENT
For
DRAFT AIR EMISSION PERMIT NO. 03900028-007

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

1. General Information

1.1. Applicant and Stationary Source Location:

Owner/Operator Address and Phone Number	Facility Address (SIC Code: 2869)
Al-Corn Clean Fuel PO Box 184 Claremont, Minnesota 55924 Randall Doyal, General Manager Phone: (507) 528-2494 Fax: (507) 528-2612	Al-Corn Clean Fuel Highway 14 West Claremont, Dodge County, Minnesota

1.2. Description Of The Facility

This facility produces fuel grade ethanol and distillers dried grains with solubles (DDGS). Emission sources include corn receiving, storing, handling, and cleaning; steam production (2 boilers); drying, storage, handling, and shipping of DDGS; fermentation and distillation; storage of ethanol of varying purities at various points in the process; storage of gasoline (denaturant); and shipping of denatured ethanol. Primary pollutants include particulate matter, particulate matter smaller than 10 microns, volatile organic compounds, and nitrogen oxides. The existing facility is a synthetic minor under the PSD and part 70 permitting programs.

1.3 Description of the Activities Allowed By This Permit Action

Al-Corn submitted a written notification to the MPCA dated October 17, 2001. Al-Corn intended that the notification be for control equipment. Notification of control equipment installation is allowed by Minn. R. 7007.1150. However, there was some increase in potential emissions of some pollutants, as calculated by Al-Corn, but the increases were well below the minor modification threshold.

Like the existing boilers and dryers, the new thermal oxidizer will be capable of burning both propane and natural gas. The facility's minor source status relies, in part, on a propane use limit to restrict potential NOx emissions at the site to less than major source thresholds as defined by 40 CFR 52.21 and 40 CFR Pt. 70. Unfortunately, the propane use limit was set for dryers and

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boilers in GP006 in the permit. GP006 is defined as Dryers 1 and 2, and Boilers 1 and 2. Though it is unclear, one could argue that the propane use limit does not apply to the new thermal oxidizer. One could also argue that since the permit does not require the removal of Boiler 2, its emissions should still be counted when calculating the facility's potential emissions.

Without the propane use limit, the potential NOx emissions increase from the thermal oxidizer would be about 74 tons per year.

To make the limits clear, and enforceable, this permit is being issued with a propane limit set at the total facility level. This allows Al-Corn to add combustion units in the future and use the limit in calculating emission increases from the modification. The fuel use limit for the diesel generators has been changed to the total facility level as well, to allow for the same flexibility.

Al-Corn is also adding a second baghouse on its hammermill system, is using a tank initially permitted as beerwell as a process water storage tank, and installed a larger beerwell than initially permitted. This was done because the tank initially permitted was not large enough for the batch process. Emissions are based on throughput, so no emissions change results from using the larger beerwell. Stack emissions testing has been performed and emissions from the fermentation scrubber are about 1/10th of the limit.

Also changed was the NOx emission factor for the dryers. Also changed was the NOx emission factor for the dryers. In a previous permit, Al-Corn had asked to use an emission factor of 7E-5 lb/cf. Stack testing was required to verify that factor. Since then, Al-Corn has received information from the manufacturer that indicates that emissions will be almost 9E-5 lb/cf. Al-Corn has asked for this change in factor, used in calculating its potential NOx emissions. This permit requires stack emissions testing that will verify that the NOx emission rate when burning natural gas from the dryers and thermal oxidizer is less than 9 E-5 lb/cf.

Updated calculations are attached.

1.4. Facility Emissions: Emissions Associated With the Modification

Changes to Facility Potential Emissions:

1. Boiler No. 2 will no longer exist, and there are no longer emissions associated with this source.
2. Fuel combustion from the thermal oxidizer will result in nitrogen oxides, carbon monoxide, and some sulfur dioxide (about the same as from Boiler No. 2). PM, PM10, and VOC limits from that stack are the same, so there is no potential increase in those pollutants.

Table 2. Total Facility Potential to Emit Summary:

	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NOx tpy	VOC tpy	CO tpy	Pb tpy	Sing le

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								HAP tpy
Total Facility Limited Potential Emissions	96.96	82.9	2.73	98.3	91.2	79.3	Neg	0.128
Total Facility Actual Emissions*	76.83	46.86	0.17	28.08	38.82	23.58	NR	NR

*1998 Emission Inventory Data; NR = not reported

Table 3. Permit Action Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD (list pollutant)		NOx	
NAAR (list pollutant)			
Part 70 Permit Program (list pollutant)		NOx	

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

2. Regulatory and/or Statutory Basis

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

Regulatory Overview of Units Affected by the Modification

Table 4. Regulatory Overview

EU, GRP, or SV #	Applicable Regulations	Comments
FC	40 CFR 52.21 40 CFR 70	Propane use limit set at the total facility level to restrict NOx emissions to less than major source levels
EU052 Beerwell	40 CFR 52.21 40 CFR 70	Emission limits set on VOC from the existing stack that this unit will vent to.
CE007 Baghouse	40 CFR 52.21 40 CFR 70	The permit sets emission limits on this stack (SV002) that help keep total facility emissions less than major source levels

3. Conclusion

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Date: 12/1/2003

Based on the information provided by Al-Corn, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 03900028-007 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: Jenny L. Reinertsen

Attachment: Calculations