

**AIR EMISSION PERMIT NO. 03900028- 004
IS ISSUED TO**

Al-Corn Clean Fuel

Al-Corn Clean Fuel
W Highway 14
Claremont, Dodge County, Minnesota 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
Total Facility Operating Permit	12/21/1995
Total Facility Operating Permit	05/08/1997
Major Amendment	05/28/1998
Major Amendment	05/10/99

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

Permit Type: State; Synthetic Minor PSD/NSR

Issue Date: October 21, 1999

Expiration: Nonexpiring
All Title I Conditions do not expire.

Rodney E. Massey
South District Manager

For Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

DS:jfh

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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.

FACILITY DESCRIPTION:

This facility produces fuel grade ethanol and distillers dried grains with solubles (DDGS). Emission sources include receiving, storing, handling, and cleaning corn; steam production (boiler); 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.

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

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/21/99

Facility Name: AI-Corn Clean Fuel
 Permit Number: 03900028 - 004

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
Production: less than or equal to 19250000 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 40 CFR Section 70.2 and Minn. R. 7007.0200
Record keeping: By the 15th day of every month, calculate and record the gallons of ethanol produced during the previous month and the gallons of 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
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)
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
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, B, and/or C, 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)
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
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

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)
Record keeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
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)
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

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 (SV 001 and 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

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

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
Corrective Action: If the pressure drop and/or flow rate are not equal to or greater than the minimum values specified herein, 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

10/21/99

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 004

Subject Item: GP 004 Tanks 1, 2, and 3**Associated Items:** TK 001 190 proof ethanol

TK 002 200 proof ethanol

TK 003 denaturant

What to do	Why to do it
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)

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/21/99

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 004

Subject Item: GP 005 Tanks 4 and 5**Associated Items:** TK 004 denatured ethanol

TK 005 denatured ethanol

What to do	Why to do it
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 volatile organic liquid (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)
Notification: Notify the Administrator within 30 days when the maximum true vapor pressure exceeds 5.2 kPa.	40 CFR Section 60.116b(d); Minn. R. 7011.1520 (C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

Subject Item: GP 006 Fuel Combustion Equipment

Associated Items: EU 013 DDGS Dryer

EU 017 Boiler #1

EU 034 Boiler #2

SV 004 (CE 004 multiple cyclone)

SV 005 Boiler #1

SV 010 Boiler #2

What to do	Why to do it
Propane Fuel Usage: less than or equal to 6873000 gallons/year using 12-month Rolling Sum	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
Fuel Burned: Natural gas and propane only	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Fuel Usage Recordkeeping. By the 15th day of each month: 1) separately record the amounts of each fuel combusted in each GP 006 emission unit during the previous calendar month; 2) calculate total GP 006 propane usage for the previous twelve-month period.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

Subject Item: SV 001 (CE 001 fabric filter)

- Associated Items:**
- EU 001 Corn Dump Pit
 - 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)

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 3.07 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Total Particulate Matter: less than or equal to 0.08 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)
Particulate Matter < 10 micron: less than or equal to 3.07 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. POLLUTION CONTROL REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 88 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 60 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 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

10/21/99

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 004

Subject Item: SV 002 (CE 002 fabric filter)

Associated Items: EU 008 Hammermill

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.68 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Total Particulate Matter: less than or equal to 0.1 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)
Particulate Matter < 10 micron: less than or equal to 0.68 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. POLLUTION CONTROL REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 97 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 93 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 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

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

Subject Item: SV 003 (CE 003 fermentation scrubber)

Associated Items: EU 009 Fermenter
 EU 010 Fermenter
 EU 011 Fermenter
 EU 012 Fermenter
 EU 032 Beer Well□□

What to do	Why to do it
A. EMISSION LIMITS	hdr
Volatile Organic Compounds: less than or equal to 5.97 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 Permit Issuance to measure SV 003 VOC emissions.	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 and Minn. R. 7017.2030, subp. 4
Performance Test Pre-test Meeting: due 7 days before each Performance Test. 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

Subject Item: SV 004 (CE 004 multiple cyclone)

Associated Items: EU 013 DDGS Dryer

GP 006 Fuel Combustion Equipment

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 7.51 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Total Particulate Matter: less than or equal to 0.077 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 7.51 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)
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
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 Permit Issuance to measure SV 004 PM10 and VOC emissions.	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 and Minn. R. 7017.2030, subp. 4
Performance Test Pre-test Meeting: due 7 days before each Performance Test.	
Performance Test: due 180 days after Permit Issuance to measure SV 004 PM emissions.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
Performance Test Pre-test meeting: due 7 days before each Performance Test.	

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/21/99

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 004

<p>General Performance Test (PT) Requirements:</p> <p>Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.</p> <p>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</p>	<p>Minn. R. 7017.2030, subp. 1-4, and Minn. R. 7017.2035, subp. 1 and 2</p>
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TABLE A: LIMITS AND OTHER REQUIREMENTS

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

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 Beer Stripper
 EU 025 Rectifier
 EU 026 Side Stripper
 EU 027 190 Proof Rundown Tank
 EU 028 Molecular Sieve
 EU 029 Evaporator

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 Permit Issuance to measure SV 007 VOC emissions.	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 and Minn. R. 7017.2030, subp. 4
Performance Test Pre-test Meeting: due 7 days before each Performance Test.	
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

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 Permit Issuance to measure SV 008 PM and PM10 emissions. Performance Test Pre-test Meeting: due 7 days before each Performance Test.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/21/99

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 004

Subject Item: FS 002 Truck traffic on unpaved 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

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

Subject Item: FS 003 Uncaptured Grain and DDGS Emissions

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 B: SUBMITTALS

10/21/99

Facility Name: AI-Corn Clean Fuel
Permit Number: 03900028 - 004

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

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

What to send	When to send	Portion of Facility Affected
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup	EU034
Notification of the Anticipated Date of Initial Startup	due 30 days before Anticipated Date of Initial Startup	EU034
Notification of the Date Construction Began	due 30 days after Start Of Construction	EU034
Performance Test Notification (written)	due 180 days after Permit Issuance to measure SV 008 PM and PM10 emissions. This requirement also includes submittal of a written performance Test Plan.	SV008
Performance Test Notification (written)	due 30 days before Performance Test to measure SV 003 VOC emissions. This requirement also includes submittal of a written Performance Test Plan.	SV003
Performance Test Notification (written)	due 30 days before Performance Test to measure SV 004 PM, PM10, and VOC emissions. This requirement also includes submittal of a written Performance Test Plan.	SV004
Performance Test Notification (written)	due 30 days before Performance Test to measure SV 007 VOC emissions. This requirement also includes submittal of a written Performance Test Plan.	SV007
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure SV 003 VOC emissions.	SV003
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure SV 004 PM, PM10, and VOC emissions.	SV004
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure SV 007 VOC emissions.	SV007
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure SV 008 PM and PM10 emissions.	SV008
Performance Test Report	due 45 days after Performance Test to measure SV 003 VOC emissions.	SV003
Performance Test Report	due 45 days after Performance Test to measure SV 004 PM, PM10, and VOC emissions.	SV004
Performance Test Report	due 45 days after Performance Test to measure SV 007 VOC emissions.	SV007
Performance Test Report	due 45 days after Performance Test to measure SV 008 PM and PM10 emissions.	SV008
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 004 PM, PM10, and 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.	SV004

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

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

TABLE B: RECURRENT SUBMITTALS

10/21/99

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 004

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 following Permit Issuance (April 1). To be submitted on a form approved by the Commissioner	Total Facility

TECHNICAL SUPPORT DOCUMENT
For
DRAFT AIR EMISSION PERMIT NO. 03900028-004

This Technical Support Document (TSD) is for all the interested parties of the draft permit. The purpose of this document is to set forth the legal and factual basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

1.1. Applicant and Stationary Source Location:

Owner/Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 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 (boiler); 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.

1.3 Description of the Activities Allowed By This Permit Action

This permit amendment increases the total facility ethanol production limit from 14.5 mmgal/yr to 19.25 mmgal/yr. In addition, the draft permit amendment changes emission limits for fermentation, DDGS drying, distillation, and DDGS cooling. This permit action requires a major permit amendment because the limits that are changed are Title I conditions. The draft permit amendment also allows the installation of a natural gas and propane-fired boiler, and establishes a 12-month rolling sum facility-wide propane usage limit to restrict NO_x emissions to less than 100 tons per year. Total facility emissions for all regulated pollutants will continue to remain below major source levels as defined under 40 CFR § 52.21 and 40 CFR § 70.2.

1.4. Facility Emissions:

Table 1. Emissions Associated With the Modification

Pollutant	Potential to Emit from the modification (lb/hr)	Potential to Emit from the modification (TPY)	*Emission Increases Authorized with this Permit Action (TPY)	*Emission Decreases Authorized with this Permit Action (TPY)	Net Emission Change (TPY)
PM	5.47	24.03	24.03		24.03
PM ₁₀	3.94	17.24	17.24		17.24
SO ₂	0.002	0.01	0.01		0.01
NO _x	-0.63	-2.78		2.78	-2.78
VOC	-0.51	-2.22		2.22	-2.22
CO	2.32	10.16	10.16		10.16
Lead	Neg	Neg	0		0
Benzene	0.0019	0.0084	0.0084		0.0084

*Permitted emission changes are due to increases/decreases of emission and process limits, installation of boiler #2, addition of the GP 006 propane usage 12-month rolling sum limit, and recalculation of FS 003 PM/PM₁₀ emissions using updated emission factors.

Table 2. *Total Facility Potential to Emit Summary:

	PM tpy	PM10 tpy	SO2 tpy	NOx tpy	CO tpy	VOC Tpy	Pb Tpy	benzene
Total Facility Limited Potential Emissions*	86.43	67.59	0.50	89.99	45.9	89.55	Neg	0.121
Total Facility Actual Emissions**	34.05	14.12	0.17	34.49	8.07	32.88	NR	NR

*These are the limited potential emissions from column 3 in GI-07 from Delta. They differ from those in the permit application sent by the company in that they have been verified and corrected as need be by Minnesota Pollution Control Agency (MPCA) staff. These are the potential emissions that would appear in a public notice.

**1997 Emissions Inventory data

Table 3. Permit Action Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD		PM, PM ₁₀ , VOC, NO _x	SO ₂ , Pb, CO
NAAR			
Part 70 Permit Program		PM ₁₀ , VOC, NO _x	NO _x , SO ₂ , Pb, CO, HAPs

* 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 of Regulatory and/or Statutory Basis of Emission or Operational Limits: Except for addition of boiler #2 (EU 034), no equipment changes have been made at the facility since issuance of PER001. See TSD for PER001 for the regulatory/statutory basis of limits and requirements.

3. Technical Information

Performance Testing: Performance testing is required within 180 days after issuance of PER004 to measure emissions for all emission points that were previously tested (SV 003, SV 004, SV 007, and SV 008). This testing is necessary because PER004 allows higher equipment operating rates due to the permitted increased ethanol production rate. Frequency of future stack tests will be determined after completion of the PER004 tests.

Propane Usage Limit: A 12-month rolling sum propane usage limit has been added to GP 006 (a new group containing all combustion sources) to restrict total facility NO_x emissions to less than 100 tons per year.

4. Conclusion

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. 03900028-004, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Marshall Cole, Yolanda Hernandez

Attachment: Current and Proposed Potential Emission Summary Tables