

**AIR EMISSION PERMIT NO. 03900028- 003  
IS ISSUED TO**

**AL-CORN CLEAN FUEL**  
West 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	11/17/94
Major Amendment	12/21/95
Major Amendment	05/08/97
Major Amendment	05/28/98

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

<b>Permit Type:</b>	State ; Syn Min PSD/NSR	Major Amendment
<b>Issue Date:</b>	July 25, 1997	<b>September 28, 1998</b>
<b>Expiration:</b>	Permit does not expire.	Permit does not expire.
	All Title I Conditions do not expire.	All Title I Conditions do not expire.

DATED:

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Michael J. Sandusky  
Division Manager  
Air Quality Division

for Peder A. Larson  
Commissioner  
Minnesota Pollution Control Agency

TLV:yma

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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.

The permit shield, however does not apply to:

1. Any national ambient air quality standards adopted under section 109 of the Clean Air Act or increment or visibility under Part C of Title I of the Clean Air Act,
2. Any state ambient air quality standard under Minn. R. ch. 7009, and
3. The state noise pollution control rules, Minn. R. ch. 7030.

**FACILITY DESCRIPTION:**

Al-Corn Clean Fuel is a fuel alcohol production plant located on West Highway 14, approximately one half mile west of Claremont, Dodge County, Minnesota. The plant is authorized to produce 14.5 million gallons of 200 proof ethanol to which a denaturant (unleaded gasoline) is added prior to shipment. A by-product of the ethanol process is dry distillers grain with solubles, which is used as livestock feed.

The facility has accepted limits on the amounts of total particulate matter, particulate matter smaller than ten microns, and volatile organic compounds that can 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 prevention of significant deterioration program (40 CFR § 52.21).

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

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

Subject Item:	Total Facility
What to do	Why to do it
Production: less than or equal to 14500000 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**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

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)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

**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: The Permittee shall check the outlet of each baghouse (SV 001 and SV 002) for any visible emissions, once each day of operation during daylight hours. Record the time and date of the inspection and whether or not any visible emissions were observed.	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. 4
Corrective actions: If visible emissions are observed, 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. 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**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

**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
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 6 inches of water column or as determined once normal operation has begun.	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 5 gallons/minute or as determined once normal operation has begun. (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
Record the pressure drop and water flow rate once each day of operation.	Title I Condition: Monitoring of equipment operating parameters 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 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**

09/28/98

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 003

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

TK 002 200 proof ethanol

TK 003 denaturant

<b>What to do</b>	<b>Why to do it</b>
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**

09/28/98

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 003

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

TK 005 denatured ethanol

<b>What to do</b>	<b>Why to do it</b>
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**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item: SV 001 Grain/DDGS handling**

**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 2.31 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 2.31 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 89.7 percent collection efficiency (See GP001 for CE001 monitoring and maintenance requirements)	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Particulate Matter < 10 micron: greater than or equal to 58.9 percent collection efficiency (See GP001 for CE001 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

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item: SV 002 Hammermill**

**Associated Items: EU 008 Hammermill**

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.51 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Total Particulate Matter: less than or equal to 0.1 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 0.51 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)
B. POLLUTION CONTROL REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 96.1 percent collection efficiency (See GP001 for CE002 monitoring and maintenance requirements)	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Particulate Matter < 10 micron: greater than or equal to 92.3 percent collection efficiency (See GP001 for CE002 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

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item: SV 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 4.5 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 98 percent control efficiency (See GP002 for CE003 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
C. TESTING REQUIREMENTS	hdr
Performance Test: due 180 days after Initial Startup of new beer well (EU032) to measure emissions of volatile organic compounds.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; emissions testing to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7017.2020, Subp. 1
Performance Test Pre-test Meeting: due 7 days before 01/07/97 (See Table B for additional performance test requirements).	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item: SV 004 DDGS Dryer**

**Associated Items: EU 013 Grain Dryer**

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 5.66 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 5.66 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 10.0 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 99 percent collection efficiency (See GP003 for CE004 monitoring and maintenance requirements)	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 (See GP003 for CE004 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
C. TESTING REQUIREMENTS	hdr
Performance Test: due 180 days after Initial Startup of new beer well (EU032) to measure emissions of particulate matter < 10 microns.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; emissions testing to avoid major source classification under 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 new beer well (EU032) to measure particulate matter emissions.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test: due 180 days after Initial Startup of new beer well (EU032) to measure emissions of volatile organic compounds.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; emissions testing to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7017.2020, Subp. 1
Performance Test Pre-test Meeting: due 7 days before 12/19/96 (See Table B for additional performance test requirements).	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item: SV 007 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 1.46 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 98 percent control efficiency (See GP002 for CE005 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
C. TESTING REQUIREMENTS	hdr
Performance Test: due 180 days after Initial Startup of new beer well (EU032) to measure emissions of volatile organic compounds.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; emissions testing to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7017.2020, Subp. 1
Performance Test Pre-test Meeting: due 7 days before 01/07/97 (See Table B for additional performance test requirements).	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item:** SV 008 Cooling cyclone

**Associated Items:** EU 018 Grain Cooler

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 1.42 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 1.42 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. TESTING REQUIREMENTS	hdr
Performance Test: due 180 days after Initial Startup of new beer well (EU032), to measure particulate matter emissions.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test: due 180 days after Initial Startup of the new beer well (EU032), to measure emissions of particulate matter <10 micron.	Title I Condition: Emissions testing to avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before 04/15/97 (See Table B for additional performance test requirements).	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item:** EU 013 Grain Dryer**Associated Items:** CE 004 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

SV 004 DDGS Dryer

<b>What to do</b>	<b>Why to do it</b>
Fuel Burned: Natural gas and propane only	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item:** EU 017 Boiler**Associated Items:** SV 005 Boiler

<b>What to do</b>	<b>Why to do it</b>
Fuel Burned: Limited to natural gas and propane only	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Recordkeeping: Record and maintain records of the amounts of each fuel combusted on a monthly basis for the previous calendar month. These records may consist of fuel meter readings or fuel bills/purchase receipts.	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. 7011.0570

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item:** EU 018 Grain Cooler

**Associated Items:** GP 003 Cyclone Monitoring and Maintenance

SV 008 Cooling cyclone

What to do	Why to do it
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 6 inches of water column or as determined once normal operation has begun.	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
If necessary, the Permittee shall apply for an amendment to update the pressure drop range given for this control device once vendor data is available or after actual normal operating data has been obtained. If necessary, the Permittee shall apply for the amendment no later than 60 days after startup of the control device.	Minn. R. 7007.1150
Calibrate the pressure gauge annually, or as often as required by manufacturing specifications and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 2 and subp. 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

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

**Associated Items:** EU 013 Grain Dryer

GP 003 Cyclone Monitoring and Maintenance

What to do	Why to do it
Pressure Drop: greater than or equal to 2 inches of water column and less than or equal to 8 inches of water column	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
If necessary, the Permittee shall apply for an amendment to update the pressure drop range given for this control device once vendor data is available or after actual normal operating data has been obtained. If necessary, the Permittee shall apply for the amendment no later than 60 days after startup of the control device.	Minn. R. 7007.1150
Calibrate the pressure gauge annually, or as often as required by manufacturing specifications and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 2 and subp. 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item: FS 002 Truck traffic on unpaved roads**

<b>What to do</b>	<b>Why to do it</b>
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**

09/28/98

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item: FS 003 Uncaptured grain emissions**

<b>What to do</b>	<b>Why to do it</b>
Clean up commodities spilled on the driveway and other facility property as required to minimize fugitive emissions to a level consistent with RACT (Reasonably Available Control Technology).	Minn. R. 7011.1005, subp. 1(A)
Opacity: less than or equal to 5 percent opacity for fugitive emissions from truck unloading of grain or grain handling activities	Minn. R. 7011.1005, subp. 3(A)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/28/98

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 003

**Subject Item: FS 004 Uncaptured DDGS emissions**

<b>What to do</b>	<b>Why to do it</b>
Clean up commodities spilled on the driveway and other facility property as required to minimize fugitive emissions to a level consistent with RACT (Reasonably Available Control Technology).	Minn. R. 7011.1005, subp. 1(A)
Opacity: less than or equal to 5 percent opacity for fugitive emission from DDGS handling activities, and from railcar DDGS loading.	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**

09/28/98

Facility Name: Al-Corn Clean Fuel  
Permit Number: 03900028 - 003

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

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**

09/28/98

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 003

What to send	When to send	Portion of Facility Affected
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup	EU032
Performance Test Notification (written)	due 30 days before Performance Test	SV003, SV004, SV007, SV008
Performance Test Plan	due 30 days before Performance Test	SV003, SV004, SV007, SV008
Performance Test Report - Microfiche Copy	due 105 days after Performance Test	SV003, SV004, SV007, SV008
Performance Test Report	due 45 days after Performance Test	SV003, SV004, SV007, SV008
Testing Frequency Plan	due 60 days after Performance Test for particulate matter and particulate matter < 10 micron. The plan shall specify a testing frequency using the test data based on 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.	SV008
Testing Frequency Plan	due 60 days after Performance Test for volatile organic compounds, particulate matter, and particulate matter <10 micron. The plan shall specify a testing frequency using the test data based on 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	SV004
Testing Frequency Plan	due 60 days after Performance Test for volatile organic compounds. The plan shall specify a testing frequency using the test data based on 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	SV003
Testing Frequency Plan	due 60 days after Performance Test for volatile organic compounds. The plan shall specify a testing frequency using the test data based on 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	SV007



**TABLE B: RECURRENT SUBMITTALS**

09/28/98

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 003

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
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**  
**AIR EMISSION PERMIT NO. 03900028-003**

This technical support document is for all parties interested in the permit. The purpose of this document is to set forth the legal and factual bases for the 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 P.O. 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, MN

**1.2. Description Of The Facility**

This facility produces fuel grade ethanol as a primary product, and Distillers' Dried grains with solubles (DDGS) as a by-product. 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, and volatile organic compounds.

**1.3. Description of the Changes Authorized With This Permit Action**

No physical modifications are authorized by this permit amendment. The permit authorizes 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.

## 1.4. Facility Emissions

**Table 1. Emission Changes Associated With the Modification**

This table is not included because there are no emission changes associated with the changes requiring this major amendment. All changes in emissions (from permit action 002 to permit action 003) are due to

- changes in the published AP-42 emission factors for natural gas combustion
- an error in the calculation of fugitive emissions (FS003) for permit action 002. The error was corrected for permit action 003.

**Table 2. Total Facility Potential to Emit Summary:**

*(See Facility Description: Potential-to-emit, and attached calculations, for details)*

	PM tpy	PM10 tpy	SO2 tpy	NOx tpy	CO tpy	VOC tpy	Benzene tpy	All HAPs tpy
Total Facility Limited Potential Emissions	68.3	52.4	0.59	74.7	29.4	87.2	0.11	0.11
Total Facility Actual Emissions *	17.0	8.15	0.08	19.3	4.83	50.4	NR**	NR**

\*From 1996 Emission Inventory

\*\* Not Reported

**Table 3. Permit Action Classification**

Classification	Major/Affected Source	*Synthetic Minor	*Minor
PSD	N/A	PM, PM <sub>10</sub> , VOC	CO, SO <sub>2</sub> , NO <sub>x</sub>
NAAR	N/A	N/A	N/A
Part 70 Permit Program	N/A	PM <sub>10</sub> , VOC	CO, SO <sub>2</sub> , NO <sub>x</sub>

\* 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 Bases of the Emission or Operational Limits

No changes have been made to any emission limits or operational limits (other than the location of the pressure drop and water flow requirements being moved from the permit to the operation and maintenance plan). For details on bases for existing limits, refer to the technical support documents for permit actions 001 and/or 002.

### **3. Technical Information**

- Any testing required for this facility will be performed in accordance with EPA test methods.

### **4. Conclusion**

Based on the information provided by Al-Corn Clean Fuel, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 03900028-003 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: Toni Volkmeier, Marshall Cole, Dave Vaaler

Attachment: Facility Description  
Calculation Summary