

TABLE OF CONTENTS

Notice to the Permittee

Permit Shield

Facility Description

Table A: Limits and Other Requirements

Table B: Submittals

Appendix A: Operator's Summary

Mr. Bob Lindholm

Page 2

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	(612) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(612) 282-5332

The rule governing these programs are contained in Minn. Rules 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. Rules pt. 70007.1800, 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. Requirements which have been determined not to apply are listed in Table A of this permit, at the beginning of total facility requirements.

The permit shield, however does not apply to: Minn. Rules ch. 7030 (Noise Pollution Control).

**AIR EMISSION PERMIT NO. 00001453-001
IS ISSUED TO**

AL-CORN CLEAN FUEL
W Highway 14
Claremont, Dodge County, MN 55924

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit applications:

Total Facility Operating Permit	11/17/94
Major Amendment	12/21/95

This permit authorizes the permittee to operate and construct the stationary source at the address listed above unless otherwise noted in Table A. The permittee must comply with all the conditions of the permit and with all general conditions listed in Minn. Rules pt. 7007.0800, subp. 16. Any changes or modifications to the stationary source must be performed in compliance with Minn. Rules pts. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: State ; Syn Min PSD/NSR
Issue Date: 4/29/96
Expiration: Permit does not expire
All Title I Conditions do not expire.

Lisa J. Thorvig
Division Manager
Air Quality Division

for Charles W. Williams
Commissioner
Minnesota Pollution Control Agency

Mr. Bob Lindholm

Page 4

FACILITY DESCRIPTION:

Al-Corn Clean Fuel is a fuel alcohol plant located approximately one half mile west of Claremont, Minnesota, on Highway 14. The plant will use approximately four million bushels of corn per year to produce ten million gallons of fuel grade ethanol. A by-product of the ethanol process is dry distillers grain with solubles (DDGS) which is used as livestock feed. A bushel of corn will yield about 18 pounds of DDGS.

The facility has accepted limits on the amounts of particulate matter 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 New Source Review program (40 CFR 52.21).

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel
 Permit Number: 03900028 - 001

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

Subject Item:	Total Facility
What to do	Why to do it
Production Limit: less than or equal to 10,000,000 gallons of ethanol produced per 12-month period, based on a 12-month rolling sum	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR 52.21; limit to avoid classification as a major source under 40 CFR 70.2 and Minn. R. 7007.0200
Recordkeeping: Monthly ethanol production and monthly calculation of 12-month rolling sum, by the 15th of the following month	Title I Condition: to show compliance with limit taken to avoid classification as a major source under 40 CFR 52.21, 40 CFR 70.2 and Minn. R. 7007.0200
Reporting: Annually by January 30th, a report of the previous 12 monthly 12-month rolling sums	Title I Condition: to show compliance with limit taken to avoid classification as a major source under 40 CFR 52.21, 40 CFR 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 shutdown of any process or control equipment if the shutdown would cause an increase in the emission of air contaminants. 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. 1
Breakdowns: Notify the Commissioner immediately of a breakdown of more than one hour duration of any process or control equipment if the breakdown causes an increase in the emission of air contaminants. 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: Within 24 hours of discovery, orally notify the Commissioner of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7007.0800, subp. 6(A)
Discovery of Deviations Endangering Human Health or the Environment Report (written): due two working days after discovery of deviation, submit a written description of any deviation endangering human health or the environment to the Commissioner. 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. 7007.0800, subp. 6(A)
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
Annual Compliance Certification: due annually by January 30th. The report covers all deviations experienced during the calendar year.	Minn. R. 7007.0800, subp. 6 (C)(1)
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

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Fugitive Emissions: Do not cause or permit the handling, use, 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)
Deviations Report: due semi-annually (i.e. July 30th and January 30th). The first report covers January 1 - June 30. The second report covers July 1 - December 31.	Minn. R. 7007.0800, subp. 6(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)
Upon promulgation of 40 CFR 60 Subpart YYY, analyze the facility and determine if Subpart YYY is an applicable requirement. If 40 CFR 60 Subpart YYY is an applicable requirement, submit a permit application requesting that the applicable requirements be added to the permit, not more than 12 months after promulgation of the standard.	Minn. Stat. 116.07, subp. 4a; Minn. R. 7007.0800, subp. 2; Minn. R. 7007.1600, subp. 1(A)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: GP 001 Non-combustion, non-fugitive VOC sources**Associated Items:** SV 003

SV 004

SV 007

What to do	Why to do it
Volatile Organic Compounds: less than or equal to 16.7 lbs/hour total, measured as total organic compounds (TOC) from all three stacks/vents (compliance to be determined using results from performance tests required under CE 003, CE 005, and SV 004).	Title I Condition: Limit to avoid major source classification under 40 CFR 52.21; to avoid major source classification under 40 CFR 70.2 and Minn. R. 7007.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: SV 001

- 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)

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.02 grains/dry standard cubic foot (met by equipment capacity and production limitations)	Minn. Stat. 116.07, subd. 4a and Minn. R. 7007.0800, subp. 2 [Proposed by Permittee - also meets the requirements of Minn. R. 7011.0715, subp. 1(A)]
Particulate Matter < 10 micron: less than or equal to 0.02 grains/dry standard cubic foot (met by equipment capacity and production limitations)	Minn. Stat. 116.07, subd. 4a and Minn. R. 7007.0800, subp. 2 [Proposed by Permittee]
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: SV 002**Associated Items:** EU 008 Hammermill

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.02 grains/dry standard cubic foot (met by equipment capacity and production limitations)	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 [Proposed by Permittee - also meets the requirements of Minn. R. 7011.0715, subp. 1(A)]
Particulate Matter < 10 micron: less than or equal to 0.02 grains/dry standard cubic foot (met by equipment capacity and production limitations)	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: SV 003

Associated Items: EU 009 Fermenter

EU 010 Fermenter

EU 011 Fermenter

EU 012 Beer Well

GP 001 Non-combustion, non-fugitive VOC sources

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Volatile Organic Compounds: less than or equal to 1.89 lbs/hour , measured as total organic compounds (TOC), at outlet of control device (to be tested as part of performance test required for CE 003)	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 [Proposed by Permittee]

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: SV 004

Associated Items: EU 013 Grain Dryer

GP 001 Non-combustion, non-fugitive VOC sources

What to do	Why to do it
Total Particulate Matter: less than or equal to 2.84 lbs/hour (met by equipment capacity and production limitations)	Minn. Stat. 116.07, subd. 4a and Minn. R. 7007.0800, subp. 2 [Proposed by Permittee - also meets the requirements of Minn. R. 7011.0610, subp. 1(A)(1)]
Particulate Matter < 10 micron: less than or equal to 2.84 lbs/hour (met by equipment capacity and production limitations)	Minn. Stat. 116.07, subd. 4a and Minn. R. 7007.0800, subp. 2 [Proposed by Permittee]
Opacity: less than or equal to 20 percent opacity except that a maximum of 60 percent opacity shall be permissible for four minutes in any 60-minute period and that a maximum of 40 percent opacity shall be permissible for four additional minutes in any 60-minute period.	Minn. R. 7011.00610, subp. 1(A)(2)
Volatile Organic Compounds: less than or equal to 6.65 lbs/hour	Minn. Stat. 116.07, subd. 4a and Minn. R. 7007.0800, subp. 2 [Proposed by Permittee]
Performance Test Pre-test Meeting: due 7 days before Initial Performance Test	Minn. R. 7017.2030, subp. 4
Initial Performance Test: due 180 days after Initial Startup to show compliance with emission limit for volatile organic compounds.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 180 days after Initial Startup to show compliance with emission limit for opacity.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: SV 007

- 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
 - GP 001 Non-combustion, non-fugitive VOC sources

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Volatile Organic Compounds: less than or equal to 0.35 lbs/hour , measured as total organic compounds (TOC), at outlet of control device (to be tested as part of performance test required for CE 005)	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 [Proposed by Permittee]

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: SV 008**Associated Items:** EU 018 Grain Cooler

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.98 lbs/hour	Title I Condition: Limit taken to avoid major source classification under 40 CFR 52.21. [Also meets the requirements of Minn. R. 7011.0715, subp. 1(A)]
Particulate Matter < 10 micron: less than or equal to 0.98 lbs/hour	Title I Condition: Limit taken to avoid major source classification under 40 CFR 52.21; to avoid major source classification under 40 CFR 70.2 and Minn. R. 7007.0200
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Performance Test Pre-test Meeting: due 7 days before Initial Performance Test	Minn. R. 7017.2030, subp. 4
Initial Performance Test: due 180 days after Initial Startup to show compliance with emission limit for particulate matter	Title I Condition: testing to show compliance with Title I emission limit; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 180 days after Initial Startup to show compliance with emission limit for particulate matter <10 microns	Title I Condition: testing to show compliance with Title I emission limit; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 180 days after Initial Startup to show compliance with opacity limit	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 009 Fermenter**Associated Items:** CE 003 Packed-Gas Adsorption Column
SV 003

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.702(a) [may be replaced with requirements of 40 CFR 60.702(b) or 40 CFR 60.702(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.702(a) to either 40 CFR 60.702(b) or 40 CFR 60.702(c), 90 days prior to change	40 CFR 60.705
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 010 Fermenter**Associated Items:** CE 003 Packed-Gas Adsorption Column
SV 003

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.702(a) [may be replaced with requirements of 40 CFR 60.702(b) or 40 CFR 60.702(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.702(a) to either 40 CFR 60.702(b) or 40 CFR 60.702(c), 90 days prior to change	40 CFR 60.705
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 011 Fermenter**Associated Items:** CE 003 Packed-Gas Adsorption Column
SV 003

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.702(a) [may be replaced with requirements of 40 CFR 60.702(b) or 40 CFR 60.702(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.702(a) to either 40 CFR 60.702(b) or 40 CFR 60.702(c), 90 days prior to change	40 CFR 60.705
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 012 Beer Well**Associated Items:** CE 003 Packed-Gas Adsorption Column
SV 003

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.702(a) [may be replaced with requirements of 40 CFR 60.702(b) or 40 CFR 60.702(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.702(a) to either 40 CFR 60.702(b) or 40 CFR 60.702(c), 90 days prior to change	40 CFR 60.705
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

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

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

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

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

What to do	Why to do it
Fuel Burned: Limited to natural gas and propane only	Minn. Stat. 116.07 subp. 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 purchase records or receipts.	40 CFR 60.13(i) to comply with 40 CFR 60.48c(g) and (i)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 018 Grain Cooler**Associated Items:** SV 008

What to do	Why to do it
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
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, recorded once every 24 hours when in operation.	Title I Condition: Monitoring of equipment operating parameters to avoid major source classification under 40 CFR 52.21 and to avoid major source classification under Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 020 Slurry Tank**Associated Items:** CE 005 Packed-Gas Adsorption Column
SV 007

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.662(a) [may be replaced with requirements of 40 CFR 60.662(b) or 40 CFR 60.662(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.662(a) to either 40 CFR 60.662(b) or 40 CFR 60.662(c), 90 days prior to change	40 CFR 60.665
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 021 Liquefaction Tank**Associated Items:** CE 005 Packed-Gas Adsorption Column
SV 007

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.662(a) [may be replaced with requirements of 40 CFR 60.662(b) or 40 CFR 60.662(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.662(a) to either 40 CFR 60.662(b) or 40 CFR 60.662(c), 90 days prior to change	40 CFR 60.665
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 022 Liquefaction Tank**Associated Items:** CE 005 Packed-Gas Adsorption Column
SV 007

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.662(a) [may be replaced with requirements of 40 CFR 60.662(b) or 40 CFR 60.662(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.662(a) to either 40 CFR 60.662(b) or 40 CFR 60.662(c), 90 days prior to change	40 CFR 60.665
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 023 Yeast Tank**Associated Items:** CE 005 Packed-Gas Adsorption Column
SV 007

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.662(a) [may be replaced with requirements of 40 CFR 60.662(b) or 40 CFR 60.662(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.662(a) to either 40 CFR 60.662(b) or 40 CFR 60.662(c), 90 days prior to change	40 CFR 60.665
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 024 Beer Stripper**Associated Items:** CE 005 Packed-Gas Adsorption Column
SV 007

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.662(a) [may be replaced with requirements of 40 CFR 60.662(b) or 40 CFR 60.662(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.662(a) to either 40 CFR 60.662(b) or 40 CFR 60.662(c), 90 days prior to change	40 CFR 60.665
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 025 Rectifier**Associated Items:** CE 005 Packed-Gas Adsorption Column
SV 007

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.662(a) [may be replaced with requirements of 40 CFR 60.662(b) or 40 CFR 60.662(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.662(a) to either 40 CFR 60.662(b) or 40 CFR 60.662(c), 90 days prior to change	40 CFR 60.665
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 026 Side Stripper**Associated Items:** CE 005 Packed-Gas Adsorption Column
SV 007

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.662(a) [may be replaced with requirements of 40 CFR 60.662(b) or 40 CFR 60.662(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.662(a) to either 40 CFR 60.662(b) or 40 CFR 60.662(c), 90 days prior to change	40 CFR 60.665
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 027 190 Proof Rundown Tank**Associated Items:** CE 005 Packed-Gas Adsorption Column
SV 007

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.662(a) [may be replaced with requirements of 40 CFR 60.662(b) or 40 CFR 60.662(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.662(a) to either 40 CFR 60.662(b) or 40 CFR 60.662(c), 90 days prior to change	40 CFR 60.665
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 028 Molecular Sieve**Associated Items:** CE 005 Packed-Gas Adsorption Column
SV 007

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.662(a) [may be replaced with requirements of 40 CFR 60.662(b) or 40 CFR 60.662(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.662(a) to either 40 CFR 60.662(b) or 40 CFR 60.662(c), 90 days prior to change	40 CFR 60.665
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: EU 029 Evaporator**Associated Items:** CE 005 Packed-Gas Adsorption Column
SV 007

What to do	Why to do it
Control equipment must be used to reduce total organic compounds (less methane and ethane) by 98%	40 CFR 60.662(a) [may be replaced with requirements of 40 CFR 60.662(b) or 40 CFR 60.662(c)]
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9
Notification: Notification of intention to change from 40 CFR 60.662(a) to either 40 CFR 60.662(b) or 40 CFR 60.662(c), 90 days prior to change	40 CFR 60.665
Record inspection and maintenance events	40 CFR 60.486 & 40 CFR 60.487

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

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

- 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)

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, recorded once every 24 hours when in operation.	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
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

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: CE 002 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items: EU 008 Hammermill**

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, recorded once every 24 hours when in operation.	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
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

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: CE 003 Packed-Gas Adsorption Column

Associated Items: EU 009 Fermenter

EU 010 Fermenter

EU 011 Fermenter

EU 012 Beer Well

What to do	Why to do it
Volatile Organic Compounds: greater than or equal to 98 percent by weight removal efficiency must be demonstrated by the control device (for Total Organic Compounds, or TOC, less ethane and methane)	Title I Condition: To avoid major source classification under 40 CFR 52.21 and to avoid major source classification under Minn. R. 7007.0200; 40 CFR 60.702(a); 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, recorded once every 24 hours when in operation. (Inlet Water Flow Rate)	Title I Condition: Monitoring of operating parameters to avoid major source classification under 40 CFR 52.21 and to avoid major source classification under 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
If necessary, the Permittee shall apply for an amendment to update the pressure drop range or inlet water flow rate 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. 7007.1400, subp. 1(C)
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
Initial Performance Test: due 180 days after Initial Startup , but not to exceed 60 days after achieving the maximum production rate at which the affected facility will be operated, to determine compliance with the overall TOC control efficiency. Test must be conducted by the methods described in 40 CFR 60.704.	Title I Condition: Testing to show compliance with Title I emission limit (GP001); Minn. R. 7017.2020 subp. 1 and 40 CFR 60.8
Performance Test Pre-test Meeting: due 7 days before Initial Performance Test	Minn. R. 7017.2030, subp. 4
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, recorded once every 24 hours when in operation.	Title I Condition: Monitoring of equipment operating parameters to avoid major source classification under 40 CFR 52.21 and to avoid major source classification under Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

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

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, recorded once every 24 hours when in operation.	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
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

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: CE 005 Packed-Gas Adsorption Column

- Associated Items:** EU 020 Slurry Tank
 EU 021 Liquefaction Tank
 EU 022 Liquefaction Tank
 EU 023 Yeast Tank
 EU 024 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
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, recorded once every 24 hours when in operation.	Title I Condition: Monitoring of equipment operating parameters to avoid major source classification under 40 CFR 52.21 and to avoid major source classification under Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Water flow rate: greater than or equal to 1 gallons/minute or as determined once normal operation has begun, recorded once every 24 hours when in operation. (Inlet Water Flow Rate)	Title I Condition: Monitoring of operating parameters to avoid major source classification under 40 CFR 52.21 and to avoid major source classification under 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
If necessary, the Permittee shall apply for an amendment to update the pressure drop range or inlet water flow rate 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. 7007.1400, subp. 1(C)
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
Volatile Organic Compounds: greater than or equal to 98 percent by weight removal efficiency must be demonstrated by the control device (for Total Organic Compounds, or TOC, less ethane and methane)	Title I Condition: To avoid major source classification under 40 CFR 52.21 and to avoid major source classification under Minn. R. 7007.0200; 40 CFR 60.662(a); Minn. R. 7007.0800, subp. 14
Performance Test Pre-test Meeting: due 7 days before Initial Performance Test	Minn. R. 7017.2030, subp. 4
Initial Performance Test: due 180 days after Initial Startup, but not to exceed 60 days after achieving the maximum production rate at which the affected facility will be operated, to determine compliance with the overall TOC control efficiency. Test must be conducted by the methods described in 40 CFR 60.664.	Title I Condition: Testing to show compliance with Title I emission limit (GP001); Minn. R. 7017.2020 subp. 1 and 40 CFR 60.8

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: TK 001 190 proof ethanol

What to do	Why to do it
Recordkeeping: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity	40 CFR 60.116b (b)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: TK 002 200 proof ethanol

What to do	Why to do it
Recordkeeping: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity	40 CFR 60.116b (b)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: TK 003 denaturant

What to do	Why to do it
Recordkeeping: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity	40 CFR 60.116b (b)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: TK 004 denatured ethanol

What to do	Why to do it
Tank must be equipped with an internal floating roof in accordance with the specifications of this part.	40 CFR 60.112b (a) and per permit application
Recordkeeping: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity	40 CFR 60.116b (b)
Recordkeeping: Record volatile organic liquid stored, period of storage, and maximum true vapor pressure	40 CFR 60.116b (c)
Notification: Notification when maximum true vapor pressure exceeds 5.2 kPa	40 CFR 60.116b (d)
Inspect moving parts of the floating roof as required under this part	40 CFR 60.113b (a)
Recordkeeping: Maintain records of the inspections required under 40 CFR 60.113b(a)	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: TK 005 denatured ethanol

What to do	Why to do it
Tank must be equipped with an internal floating roof in accordance with the specifications of this part.	40 CFR 60.112b (a) and per permit application
Recordkeeping: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity	40 CFR 60.116b (b)
Recordkeeping: Record volatile organic liquid stored, period of storage, and maximum true vapor pressure	40 CFR 60.116b (c)
Notification: Notification when maximum true vapor pressure exceeds 5.2 kPa	40 CFR 60.116b (d)
Inspect moving parts of the floating roof as required under this part	40 CFR 60.113b (a)
Recordkeeping: Maintain records of the inspections required under 40 CFR 60.113b(a)	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: FS 001 Submerged loading of ethanol for shipping

What to do	Why to do it
Inspection: On a monthly basis, VOC equipment with a concentration over 10% VOC by weight must be monitored for leaks with an organic vapor analyzer. Each leak detected must be recorded, and the source of the leak be repaired within 15 days after detection.	40 CFR 60.482-1 through 40 CFR 60.482-9

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

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

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

Subject Item: FS 003 Uncaptured grain and DDGS emissions

What to do	Why to do it
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)

TABLE B: SUBMITTALS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

Table B lists the submittals you must send to the Commissioner. Table B is divided into two sections, for source-specific submittal requirements and for submittals required of all permittees. Source-specific submittals are further organized as either one-time only or recurrent requirements. You may also be subject to additional reporting requirements contained in the compliance schedule located in Table C of this permit. All submittals must be postmarked or received by the date specified in the table, and certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Submittals which must be provided on standardized forms approved by the Commissioner are noted in Tables B and C.

Send any application for a permit or permit amendment to: Permit Information Coordinator, Permit Section, Air Quality Division, Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4914. Also send the Permit Information Coordinator notices of: accumulated insignificant activities, installation of control equipment, replacement of an emissions unit, and changes that contravene a permit term.

Send all other submittals to: Compliance Tracking Coordinator, Compliance Determination Unit, Air Quality Division, Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

04/29/96

Facility Name: AI-Corn Clean Fuel

Permit Number: 03900028 - 001

What to send	When to send	Portion of Facility Affected
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup . Submit name and number of each unit and the actual date of initial startup of each unit.	EU009, EU010, EU011, EU012, EU017, EU018, EU020, EU021, EU022, EU023, EU024, EU025, EU026, EU027, EU028, EU029, FS001
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of the control device	CE001, CE002, CE003, CE004, CE005
Notification of the Anticipated Date of Initial Startup	due 30 days before Anticipated Date of Initial Startup but no more than 60 days before. Submit the name and number of each unit and the anticipated date of initial startup for each unit.	EU009, EU010, EU011, EU012, EU017, EU020, EU021, EU022, EU023, EU024, EU025, EU026, EU027, EU028, EU029, FS001
Performance Test Notification (written)	due 30 days before Initial Performance Test	CE003, CE005, SV004, SV008
Performance Test Plan	due 30 days before Initial Performance Test	CE003, CE005, SV004, SV008
Performance Test Report - Microfiche Copy	due 105 days after Initial Performance Test	CE003, CE005, SV004, SV008
Performance Test Report	due 45 days after Initial Performance Test	CE003, CE005, SV004, SV008
Testing Frequency Plan	due 60 days after Initial Performance Test for overall TOC control efficiency. 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	CE003, CE005
Testing Frequency Plan	due 60 days after Initial Performance Test for particulate matter <10 microns. 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 Initial Performance Test for particulate matter. 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 Initial 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	SV004

TABLE B: RECURRENT SUBMITTALS

04/29/96

Facility Name: Al-Corn Clean Fuel

Permit Number: 03900028 - 001

What to send	When to send	Portion of Facility Affected
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. 00001453-001

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

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 2869)
Al-Corn Clean Fuel	Al-Corn Clean Fuel
P.O. Box 184	West Highway 14
Claremont, MN 55924	Claremont, Dodge County

1.2. Description Of The Permit Action

A total facility permit (Air Emission Permit No. 03900028-001) was issued for construction of this facility on April 12, 1995. On December 21, 1995, the permittee submitted an application for a major amendment to the permit, to make changes that were determined necessary when construction began. Based on the number of changes requested, it was decided to take this opportunity to reissue the total facility permit (rather than amend the existing one) and enter the data into the Delta permit system. This permit is based on complete permit applications received on November 17, 1994, and December 21, 1995.

This total facility permit is for construction and operation of a fuel -grade ethanol plant. This will be a ten million gallon per year fuel alcohol plant located approximately one half mile west of Claremont, Minnesota, on Highway 14. The plant will use approximately four million bushels of corn per year. As a by-product of the ethanol process, the plant will also have the capacity to produce about 36,000 tons per year of distillers dried grain with solubles (DDGS), which is used as a high protein livestock feed. The facility is permitted as a non-major source under the Operating Permit Program (40 CFR 70) and New Source Review/Prevention of Significant Deterioration (40 CFR 52.21).

Following is a brief description of the process for making ethanol:

- Corn is received by truck, cleaned, and transferred to storage. Emissions are particulate matter, and are controlled by a fabric filter baghouse.

- Corn is milled (ground) in preparation for processing. Emissions are particulate matter, and are controlled by a fabric filter baghouse.
- Starch conversion - starch is broken down into sugar. The milled corn is blended with water, backset, and alpha amylase enzyme to form a mash which is slurried in a retention vessel to allow time for water and enzyme to soak into the corn particles. Steam is injected into the flow of mash to raise the temperature and pressure to cook and sterilize the mash. The mash is then cooled and transferred to a second stage liquefaction tank where more enzyme is added to further break down the starch. The mash is then diluted with additional water and cooled for fermentation. Emissions are combustion products from burning natural gas in the boiler, which provides the steam for cooking.
- Fermentation - this is the conversion of sugars in the mash to ethanol. Yeast and glucoamylase enzyme are added to the mash and the resulting solution is transferred to a fermentation tank. The enzyme breaks down the sugars into glucose, which is then converted by the yeast to ethanol and carbon dioxide (CO₂). The ethanol goes into solution with the mash to make beer. The CO₂ flows to a scrubber which captures the entrained ethanol. When all the sugar is converted to ethanol (approximately 48 hours) the solution is transferred to a beer well. Emissions from this process are volatile organic compound (VOC)/ethanol, and are controlled by a wet scrubber.
- Distillation/Dehydration - In this process, ethanol is separated from the beer and purified to 200 proof (100%, or anhydrous ethanol). Beer is pumped continuously from the beer well to the top of the stripper column. Steam is injected at the bottom of the stripper and ethanol works its way up the column as a vapor. Water and the remaining corn solids work their way down and out of the stripper as a liquid slurry. The ethanol vapor continues to the recifier where it becomes concentrated as it continues to work its way up as a vapor and reaches 190 proof at the top. The water which came over from the stipper with ethanol works its way down and out the bottom of the side stripper. The 190 proof ethanol is pumped though a vaporizer/superheater and the resulting vapor flows down through a molecular sieve bed. The sieve material absorbs the remainder of the water and 200 proof ethanol vapor flow out the bottom of the sieve. The ethanol is condensed and pumped to a storage tank. The emissions from this process are ethanol vapors, which are controlled by a wet scrubber.
- DDGS processing - whole stillage, which consists of the remaining corn solids and water coming off the bottom of the stripper column, is processed to produce a dry product for storage and shipment to cattle feeders. The stillage is centrifuged to yeild thin stillage and solids. Some of the thin stillage goes back to the starch conversion process to be used as backset. The rest is fed to the evaporator. The evaporator evaporates water to make syrup. The syrup is pumped tot he mixing auger to be combined with the colids coming off the centrifuge. The mixture is conveyed to the dryer where it is dried, and then to the grain cooling cyclone. From the cooling cyclone it goes to storage, and is shipped out as required. Emission from the DDGS processing include small airborne particles from the dryer, which

are controlled by a cyclone, some particulate matter from the cooler, particulate matter from storage and loadout which are controlled by a fabric filter baghouse, and combustion products from burning natural gas in the dryer, and some ethanol emissions from evaporation of ethanol from the drying DDGS.

An Environmental Assessment Worksheet (EAW) was completed for this project prior to the first permit (Air Emission Permit No. 03900028-001) being issued. At this time, the expected emission from this facility are less than they were expected to be at the time the EAW was completed. Therefore, an additional EAW is not required for this project.

1.3. Emissions of the Facility

Table 1. Total Facility Potential to Emit Summary and Attainment Status:

Pollutant	Potential to Emit (Tons/year =TPY)	Attainment or Unclassified? (Yes or No)
Particulate Matter (PM)	61.95	Not Applicable
Particulate Matter less than 10 micron (PM ₁₀)	41.43	Yes
Sulfur Dioxide (SO ₂)	0.23	Yes
Nitrogen Oxides (NO _x)	28.80	Yes
Volatile Organic Compounds (VOCs)/Ozone	60.83	Yes
Carbon Monoxide (CO)	9.76	Yes
Lead	0	Yes
Hazardous Air Pollutants (add as needed)	0.09	Not Applicable

Table 2. Facility Classification

Classification (put x in appropriate box)	Major	Synthetic Minor	Minor	N/A
Prevention of Significant Deterioration		X		
Non Attainment Area (list pollutant)				X
Operating Permit Program		X		

[Contact]

Page 4

2. Regulatory and/or Statutory Bases of Emission Limits

Subject Item:	Total Facility
Requirements	See attached CD-01 Forms for Total Facility
Factual and legal basis for above:	See attached CD-01 Forms for Total Facility
Comments:	Facility is limited to producing no more than 10 million gallons of ethanol per year, based on a 12-month rolling sum

Attachments to this page:

- CD-01 for Total Facility

[Contact]

Page 6

2. Regulatory and/or Statutory Bases of Emission Limits, continued

Subject Item:	SV001
Associated Items:	Fabric Filter (CE001), which controls emissions from corn dump pit (EU001), corn elevator (EU002), scalper (EU003), corn bins (EU004, 005, 006, 007), DDGS dump pit (EU014), DDGS elevator (EU015), and DDGS loadout (EU016)
Requirements	See attached CD-01 Forms for SV001, CE001
Factual and legal basis for above:	See attached CD-01 Forms for SV001, CE001
Comments:	Testing of PM and PM10 emissions is not required, because the potential emissions based on emission factors are less than the hourly limit proposed by the applicant. Facility PTE is based on the hourly limits in the permit.
	The PM emissions are subject to the Industrial Process Equipment Rule (Minn. R. 7011.0715, subp. 1(A)). However, the emission limits proposed by the applicant meet and exceed those requirements.
	This stack is not subject to the control requirements of Minnesota's Standards of Performance for Bulk Agricultural Commodity Facilities (Minn. R. 7011.1000 - 7011.1015), because the annual commodity throughput is less than 120,000 tons per year, and the facility is located outside the Minneapolis-St. Paul Air Quality Control Region, in a city with a population less than 7,500.
	The emission units associated with this stack have no applicable requirements

Attachments to this page:

- CD-01 for SV001, CE001
- Industrial Process Equipment Spreadsheet for "emission point 1"

[Contact]

Page 8

2. Regulatory and/or Statutory Bases of Emission Limits, continued

Subject Item:	SV002
Associated Items:	Fabric Filter (CE002), which controls emissions from the hammermill (EU008)
Requirements	See attached CD-01 Forms for SV002, CE002
Factual and legal basis for above:	See attached CD-01 Forms for SV002, CE002
Comments:	Testing of PM and PM10 emissions is not required, because the potential emissions based on emission factors are less than the hourly limit proposed by the applicant. Facility PTE is based on the hourly limits in the permit.
	The PM emissions are subject to the Industrial Process Equipment Rule (Minn. R. 7011.0715, subp. 1(A)). However, the emission limits proposed by the applicant meet and exceed those requirements.
	This stack is not subject to the control requirements of Minnesota's Standards of Performance for Bulk Agricultural Commodity Facilities (Minn. R. 7011.1000 - 7011.1015), because the annual commodity throughput is less than 120,000 tons per year, and the facility is located outside the Minneapolis-St. Paul Air Quality Control Region, in a city with a population less than 7,500.
	The emission unit associated with this stack has no applicable requirements

Attachments to this page:

- CD-01 for SV002, CE002
- Industrial Process Equipment Spreadsheet for "emission point 2"

[Contact]

Page 10

2. Regulatory and/or Statutory Bases of Emission Limits, continued

Subject Item:	SV003
Associated Items:	Scrubber (CE003), which controls emissions from the fermentation equipment (EU009, 010, 011, 012)
Requirements	See attached CD-01 Forms for SV003, CE003, EU009, EU010, EU011, EU012
Factual and legal basis for above:	See attached CD-01 Forms for SV003, CE003, EU009, EU010, EU011, EU012
Comments:	The VOC limit was proposed by the applicant, and was derived using the amount of ethanol present in the process and the control efficiency of the scrubber.
	When performing the required testing of the scrubber efficiency, the amount of VOC at the scrubber outlet is measured. That measurement can be used to demonstrate compliance with the VOC emission limit.

Attachments to this page:

- CD-01 for SV003, CE003, EU009, EU010, EU011, EU012

[Contact]

Page 12

2. Regulatory and/or Statutory Bases of Emission Limits, continued

Subject Item:	SV004
Associated Items:	Multiclone (CE004), which controls emissions from the DDGS dryer (EU013)
Requirements	See attached CD-01 Forms for SV004, CE004, EU013
Factual and legal basis for above:	See attached CD-01 Forms for SV004, CE004, EU013
Comments:	The VOC limit was proposed by the applicant, and was derived using the amount of ethanol present in the process and the control efficiency of the dryer. This is not a Title I condition, because even if the dryer does not combust the ethanol in the DDGS, the amount that could be emitted would not make the source major.
	Testing is being requested for VOCs, to demonstrate that the dryer does act to combust the ethanol in the DDGS. Results of this test are also to be used to show compliance with the group VOC limit for SV003, SV004, and SV008.
	Testing is being requested for opacity, to demonstrate that the dryer does act to combust the ethanol in the DDGS. If VOCs are not completely combusted, there can be bluish smoke/haze emitted.
	The PM emissions from the dryer are subject to the requirements of Minn. R. 7011.0610, subp. 1(A)(1). However, the permit limit proposed by the applicant meets and exceeds these requirements.
	Testing of PM and PM10 emissions is not required, because the potential emissions based on emission factors are less than the hourly limit proposed by the applicant. Facility PTE is based on the hourly limits in the permit.

Attachments to this page:

- CD-01 for SV004, CE004, EU013
- Industrial Process Equipment Spreadsheet for “emission point 4”

[Contact]

Page 14

2. Regulatory and/or Statutory Bases of Emission Limits, continued

Subject Item:	SV005
Associated Items:	Boiler (EU017)
Requirements	See attached CD-01 Form for EU017
Factual and legal basis for above:	See attached CD-01 Form for EU017
Comments:	There are no emission limits associated with this boiler. The boiler is subject to NSPS, 40 CFR 60, subpart Dc. Because the boiler burns only natural gas or propane, it is not subject to the emission limits of subpart Dc. Because it is subject to some parts of subpart Dc, the emission limits of Minn. R. 7011.0515 do not apply.

Attachments to this page:

- CD-01 for EU017

[Contact]

Page 16

2. Regulatory and/or Statutory Bases of Emission Limits, continued

Subject Item:	SV007
Associated Items:	Scrubber (CE005) and distillation units (EU020, 021, 022, 023, 024, 025, 026, 027, 028, 029)
Requirements	See attached CD-01 Forms for SV007, CE005, EU010, EU021, EU022, EU023, EU024, EU025, EU026, EU027, EU028, EU029
Factual and legal basis for above:	See attached CD-01 Forms for SV007, CE005, EU010, EU021, EU022, EU023, EU024, EU025, EU026, EU027, EU028, EU029
Comments:	The VOC limit was proposed by the applicant, and was derived using the amount of ethanol present in the process and the control efficiency of the scrubber.
	When performing the required testing of the scrubber efficiency, the amount of VOC at the scrubber outlet is measured. That measurement can be used to demonstrate compliance with the VOC emission limit.

Attachments to this page:

- CD-01 for SV007, CE005, EU020, EU021, EU022, EU023, EU024, EU025, EU026, EU027, EU028, EU029

[Contact]

Page 18

2. Regulatory and/or Statutory Bases of Emission Limits, continued

Subject Item:	SV008
Associated Items:	Grain cooler/cyclone (EU018)
Requirements	See attached CD-01 Forms for SV008, EU018
Factual and legal basis for above:	See attached CD-01 Forms for SV008, EU018
Comments:	The PM emissions from the dryer are subject to the requirements of Minn. R. 7011.0715, subp. 1(A). However, the permit limit proposed by the applicant meets and exceeds these requirements.
	Testing of PM and PM10 emissions is required, because the potential emissions based on emission factors are more than the hourly limit proposed by the applicant. Facility PTE is based on the hourly limits in the permit.

Attachments to this page:

- CD-01 for SV008, EU018
- Industrial Process Equipment Spreadsheet for “emission point 8”

[Contact]

Page 20

2. Regulatory and/or Statutory Bases of Emission Limits, continued

Subject Item:	GP001
Associated Items:	SV003, SV004, SV008
Requirements	See attached CD-01 Form for GP001
Factual and legal basis for above:	See attached CD-01 Form for GP001
Comments:	This group limit was established so that, even though none of the three stacks individually are expected to cause the source to become major under PSD, the emissions from all three combined to not cause the source to become major under PSD

Attachments to this page:

- CD-01 for GP001

[Contact]

Page 22

2. Regulatory and/or Statutory Bases of Emission Limits, continued

Subject Item:	TK001, TK002, TK003, TK004, TK005
Requirements	See attached CD-01 Forms for TK001, TK002, TK003, TK004, TK005
Factual and legal basis for above:	See attached CD-01 Forms for TK001, TK002, TK003, TK004, TK005
Comments:	These tanks are subject to NSPS Subpart Kb, to varying degrees. No other requirements have been added, other than a requirement to maintain records showing that the required inspection schedule is being complied with, per 40 CFR 60.113b(a).

Attachments to this page:

- CD-01 for TK001, TK002, TK003, TK004, TK005

[Contact]

Page 24

2. Regulatory and/or Statutory Bases of Emission Limits, continued

Subject Item:	FS001
Requirements	See attached CD-01 Form for FS001
Factual and legal basis for above:	See attached CD-01 Form for FS001
Comments:	This source is subject only to the requirements of 40 CFR 60, Subpart VV. No additional requirements have been added

Subject Item:	FS002
Requirements	See attached CD-01 Form for FS002
Factual and legal basis for above:	See attached CD-01 Form for FS002
Comments:	None

Subject Item:	FS003
Requirements	See attached CD-01 Form for FS003
Factual and legal basis for above:	See attached CD-01 Form for FS003
Comments:	None

Attachments to this page:

- CD-01 for FS001, FS002, FS003

[Contact]

Page 26

3. Conclusion

Based on the information provided by Al-Corn Clean Fuel, the MPCA has reasonable assurance that the proposed construction and operation of the emission facility, as described in the Air Emission Permit No. 00001453-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Attachments:

1. GI-07 Facility Emission Summary
2. Summary of Calculations
3. Remaining Application forms (Delta application) (GI-01, GI-04, GI-05A, GI-05B, GI-05C, GI-05D)

Need further information?

Permit Engineer: Toni Volkmeier
Telephone No.: 297-7708

[Contact]

Page 28

[Contact]

Page 29

Attachment 1
GI-07 Facility Emission Summary

[Contact]

Page 30

Attachment 2
Summary of Calculations

[Contact]

Page 32

[Contact]

Page 33

Attachment 3
Remaining Application Forms
GI-01, GI-04, GI-05A, GI-05B, GI-05C, GI-05D