AIR EMISSION PERMIT NO. 13300023- 004
IS ISSUED TO

AGRI-ENERGY LLC

AGRI-ENERGY LLC
502 South Walnut Avenue
Luverne, Rock County, Minnesota 56156

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	01/17/1997
Major Amendment	05/07/1998
Major Amendment	10/10/2000

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

Permit Type: State; Synthetic Minor Pt. 70 & PSD/NSR
Issue Date: December 14, 2000
Expiration: Permit Does Not Expire
All Title I Conditions do not expire.

Don Smith
Rodney E. Massey, P.E.
District Director

for Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

MC:lk

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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 provisions of the applicable requirements identified in the permit as the basis of each condition.

Subject to the limitations Minn. R. 7007.1800 and 7017,0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

This facility produces fuel ethanol and Distillers Dried Grains with Solubles (DDGS) from corn. Corn is received by truck, and is cleaned, ground, and then fermented to produce a mixture of ethanol and water. After fermentation, pure ethanol is produced by distillation, then is denatured with unleaded gasoline, and stored in tanks prior to shipping. The remaining fermented corn is dried to produce DDGS. The DDGS is stored, and then shipped by truck or railcar.

This permit authorizes an increase in the annual ethanol production limit from 17.25 mmgal/yr to 22 mmgal/yr. All of the emission limits in this permit are the same as those in the previous permit (No. 13300023-003). In addition, this permit does not authorize any physical changes or modifications to the facility. The production increase will be primarily due to the use of new fermentation enzymes that increase ethanol production efficiency.

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

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

Subject Item: Total Facility

What to do	Why to do it
Production: less than or equal to 22000000 gallons/year using 12-month Rolling Sum of ethanol (200 proof, prior to addition of denaturant). During the first 12 months after issuance of this permit, ethanol production is limited to 1,833,333 gallons per calendar month.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Recordkeeping: by the 15th day of each 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. The plan shall specify the minimum values for pressure drop and water flow rate for CE003 and CE005, and the minimum and maximum values for pressure drop for CE004 and EU024.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
General Performance Test (PT) Requirements: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. PT Notification (written): due 30 days before each Performance Test PT Plan: due 30 days before each Performance Test PT Pre-test Meeting: due 7 days before each Performance Test PT Report: due 45 days after each Performance Test PT Report-Microfiche: due 105 days after each Performance Test	Minn. R. 7017.2030, subps. 1-4 and Minn. R. 7017.2035 subps. 1 and 2
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
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
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 pollution 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

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 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 the 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
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)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. 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 this 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

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **GP 001 Boiler & Dryer fuel use**

Associated Items: EU 015 DDGS Dryer/Burner

EU 018 Boiler

SV 004 DDGS Dryer (CE 004)

SV 011 Boiler

What to do	Why to do it
Nitrogen Oxides: less than or equal to 92 tons/year using 12-month Rolling Sum	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Recordkeeping: By the 15th of each month, calculate and record the GP 001 NOx emissions for the previous month, and the GP 001 NOx emissions from the previous 12 months (12-month rolling sum). To calcuate the monthly NOx emissions, use the recordkeeping requirements described below and Equation 1 in the Appendix to this permit.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Recordkeeping - Fuel Usage: Once each day, record the following: a. cubic feet of natural gas combusted in the DDGS dryer and the boiler during the previous day b. gallons of propane combusted in the DDGS dryer and the boiler during the previous day	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Recordkeeping - By the 15th of each month, calculate and record the following: a. cubic feet of natural gas combusted in the DDGS dryer and the boiler during the previous month b. gallons of propane combusted in the DDGS dryer and the boiler during the previous month	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Fuel 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

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **GP 002 Baghouse Monitoring Requirements**

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

SV 001 Grain/DDGS Handling (CE 001)

SV 002 Hammermill (CE 002)

What to do	Why to do it
Operation and Maintenance of Fabric Filter: The Permittee shall operate and maintain the fabric filters 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 each baghouse stack/vent (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. 14
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 52.21; 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 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

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **GP 003 Scrubber Monitoring Requirements**

Associated Items: CE 003 Packed-Gas Adsorption Column

CE 005 Packed-Gas Adsorption Column

What to do	Why to do it
Record the pressure drop and water flow rate of each scrubber 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 actions: If the pressure drop and/or water flow rate are not equal to or greater than the minimum values specified in the Operation and Maintenance Plan, the Permittee shall take corrective actions as soon as possible to achieve the required operating parameters. 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 52.21; 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

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **GP 004 Cyclone Monitoring Requirements**

Associated Items: CE 004 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

EU 024 Cooling Cyclone

What to do	Why to do it
Record pressure drop at each cyclone 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 actions: If the pressure drop is not within the range of values specified in the Operation and Maintenance Plan, the Permittee shall take corrective actions as soon as possible to achieve the required operating parameters. 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 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Calibrate the pressure gauge annually, or as often as required by manufacturing specifications and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 2 and subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **GP 005 Ethanol Storage Tanks Subject to NSPS Subpart Kb**

Associated Items: TK 006 Ethanol (CAS #64-17-5), 95%

TK 007 Ethanol (CAS #64-17-5), 100%

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 Section 60.116b(b); Minn. R. 7011.1520 (C)
Recordkeeping: Maintain a record of the volatile organic liquid stored, the period of storage, and the maximum true vapor pressure during the respective storage period.	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

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **GP 006 Denatured Ethanol Tanks Subject to NSPS Subpart Kb**

Associated Items: TK 009 Ethanol (CAS #64-17-5), 95%; Unleaded Gas (CAS #8006-61-9), 5%

TK 010 Ethanol (CAS #64-17-5), 95%; Unleaded Gas (CAS #8006-61-9), 5%

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

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **SV 001 Grain/DDGS Handling (CE 001)**

Associated Items: EU 001 Corn Dump Pit/Auger

EU 002 Corn Elevator

EU 003 Scalper

EU 004 Corn Bin

EU 005 Corn Bin

EU 006 Corn Bin

EU 007 Corn Bin

EU 016 DDGS Dump Pit/Auger

EU 017 DDGS Elevator

EU 020 Rail Load Spout

EU 021 Screw Conveyor

EU 022 Truck Load Spout

GP 002 Baghouse Monitoring Requirements

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 1.5 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 1.5 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 10 percent opacity	Minn. R. 7011.1005, subp. 3(D)
B. POLLUTION CONTROL REQUIREMENTS	hdr
Total Particulate Matter: less than or equal to 94.4 percent collection efficiency (See GP 002 for CE 001 monitoring and maintenance requirements.)	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Particulate Matter < 10 micron: less than or equal to 88.6 percent collection efficiency (See GP 002 for CE 001 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

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **SV 002 Hammermill (CE 002)**

Associated Items: EU 008 Hammermill/Belt Scale

GP 002 Baghouse Monitoring Requirements

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.69 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 0.69 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: less than or equal to 97.9 percent collection efficiency (See GP 002 for CE 002 monitoring and maintenance requirements.)	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Particulate Matter < 10 micron: less than or equal to 95.8 percent collection efficiency (See GP 002 for CE 002 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

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **SV 003 Fermentation scrubber (CE 003)**

Associated Items: EU 025 Fermenter

EU 026 Fermenter

EU 027 Fermenter

EU 028 Beer Well

What to do	Why to do it
A. EMISSION LIMITS	hdr
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Volatile Organic Compounds: less than or equal to 7.0 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
B. POLLUTION CONTROL REQUIREMENTS	hdr
Volatile Organic Compounds: less than or equal to 96.3 percent control efficiency (See GP 003 for CE 003 monitoring and maintenance requirements.)	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
C. TESTING REQUIREMENTS	hdr
Performance Test: due 180 days after Permit Issuance to measure volatile organic compound (VOC) emissions. See "General Performance Test Requirements" in Subject Item "Total Facility" in Table A for additional performance test requirements.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **SV 004 DDGS Dryer (CE 004)**

Associated Items: EU 015 DDGS Dryer/Burner

GP 001 Boiler & Dryer fuel use

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 11.41 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Total Particulate Matter: less than or equal to 0.07 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 11.41 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 9.0 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
B. POLLUTION CONTROL REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 80 percent control efficiency (See GP004 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 80 percent control efficiency (See GP004 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 Permit Issuance to measure emissions of total particulate matter (PM). See "General Performance Test Requirements" in Subject Item "Total Facility" in Table A for additional performance test requirements.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test: due 180 days after Permit Issuance to measure emissions of particulate matter <10 microns (PM10). See "General Performance Test Requirements" in Subject Item "Total Facility" in Table A for additional performance test requirements.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7017.2020, subp. 1
Performance Test: due 180 days after Permit Issuance to measure volatile organic compound emissions (VOC). See "General Performance Test Requirements" in Subject Item "Total Facility" in Table A for additional performance test requirements.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7017.2020, subp. 1
Performance Test: due 180 days after Permit Issuance to measure opacity. See "General Performance Test Requirements" in Subject Item "Total Facility" in Table A for additional performance test requirements.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **SV 010 Distillation scrubber (CE 005)**

Associated Items: EU 009 Beer Stripper

EU 010 Rectifier

EU 011 Side Stripper

EU 012 Molecular Sieve

EU 014 Evaporator

What to do	Why to do it
A. EMISSION LIMITS	hdr
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Volatile Organic Compounds: less than or equal to 0.8 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
Volatile Organic Compounds: less than or equal to 98.4 percent control efficiency (See GP 003 for CE 005 monitoring and maintenance requirements.)	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
C. TESTING REQUIREMENTS	hdr
Performance Test: due 180 days after Permit Issuance to measure volatile organic compound emissions. See "General Performance Test Requirements" in Subject Item "Total Facility" in Table A for additional performance test requirements.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: SV 014 Cooling cyclone

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 1.61 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Total Particulate Matter: less than or equal to 0.094 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 1.61 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 Permit Issuance to measure emissions of total paticulate matter (PM). See "General Performance Test Requirements" in Subject Item "Total Facility" in Table A for additional performance test requirements.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test: due 180 days after Permit Issuance to measure emissions of particulate matter <10 micron (PM10). See "General Performance Test Requirements" in Subject Item "Total Facility" in Table A for additional performance test requirements.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7017.2020, subp. 1
Performance Test: due 180 days after Permit Issuance to measure opacity. See "General Performance Test Requirements" in Subject Item "Total Facility" in Table A for additional performance test requirements.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **SV 016 Flare**

Associated Items: EU 030 Bio-Digester Flare

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **EU 018 Boiler**

Associated Items: GP 001 Boiler & Dryer fuel use

SV 011 Boiler

What to do	Why to do it
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 bills or meter readings.	February 20, 1992, EPA memorandum and 40 CFR Section 60.13(l) to meet requirements of 40 CFR Section 60.48c(g) and (l); Minn. R. 7011.0570
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

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: **EU 029 Grain Dryer**

Associated Items: SV 015 Grain Dryer

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735.	Minn. R. 7011.0610, subp. 1(A)(1)
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. 7011.0610, subp. 1(A)(2)
B. POLLUTION CONTROL REQUIREMENTS	hdr
The perforations of a column dryer screen must not exceed 3/32 inches in diameter.	Minn. R. 7011.1005, subp. 5(A)
C. OPERATING REQUIREMENTS	hdr
Operating Hours: less than or equal to 2308 hours/year using 12-month Rolling Sum	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Recordkeeping: At the end of the last day of each month, record the reading on the dryer operating hours meter.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Recordkeeping - By the 15th day of each month, calculate and record the number of hours the dryer has operated during the previous month and 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
Fuel Burned - Natural gas only	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: TK 008 Unleaded Gas (CAS #8006-61-9), 100%

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 Section 60.116b(b); Minn. R. 7011.1520 (C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: FS 001 Truck Traffic Fugitive Emissions

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

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: FS 002 Grain Handling Fugitive 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)
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

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: FS 004 DDGS Handling Fugitive 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)
Opacity: less than or equal to 5 percent opacity for fugitive emissions from railcar loading of DDGS or DDGS handling activities.	Minn. R. 7011.1005, subp. 3(A)
Opacity: less than or equal to 10 percent opacity for fugitive emissions from DDGS truck loading.	Minn. R. 7011.1005, subp. 3(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

Subject Item: FS 005 Tank Valves, Flanges, Seals, etc. in distillation/fermentation building (SV 012; EU 019)

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

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

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

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

TABLE B: SUBMITTALS

12/14/00

Facility Name: Agri-Energy LLC

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

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

Send any application for a permit or permit amendment to:

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

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:
- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

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

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

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

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

What to send	When to send	Portion of Facility Affected
Performance Test Report - Microfiche Copy	due 105 days after Performance Test	SV003, SV004, SV010, SV014
Performance Test Report	due 45 days after Performance Test	SV003, SV004, SV010, SV014
Report	due 270 days after Submittal of the Emission Characterization Plan. The Report shall identify, quantify, and chemically characterize all emission sources, including fugitive emission sources, at the Facility. The Report shall be submitted to Mr. Daniel Pena of the Minnesota Department of Health.	Total Facility
Submittal	due 90 days after Permit Issuance. This submittal shall be an Emission Characterization Plan based on and meeting the requirements of Minnesota Department of Health guidance. The Plan shall describe how the Permittee will identify, quantify, and chemically characterize the emissions from all emission sources, including fugitive sources, at the Facility. The Plan shall be submitted to Mr. Daniel Pena, SAC Unit, Environmental Health Division, Minnesota Department of Health, 121 East 7th Place Suite 220, PO Box 64975, St. Paul, MN 55101-0975. Telephone No. (651) 215-0774.	Total Facility
Testing Frequency Plan	due 60 days after Performance Test for PM and PM10 emissions. The plan shall specify a testing frequency based on results of the PM and PM10 testing (required by this permit) and MPCA guidance. Future performance tests based on year (12-month), 36-month, and 60-month intervals, or as applicable, shall be required on written approval by the MPCA per Minn. R. 7017.2020, subp. 1.	SV014
Testing Frequency Plan	due 60 days after Performance Test for PM, PM10, and VOC emissions. The plan shall specify a testing frequency based on the results of SV 004 PM, PM10, and VOC testing (required by this permit) and MPCA guidance. Future performance tests based on year (12-month), 36-month, and 60-month intervals, or as applicable, shall be required on written approval by the MPCA per Minn. R. 7017.2020, subp. 1.	SV004
Testing Frequency Plan	due 60 days after Performance Test for volatile organic compound (VOC) emissions. The plan shall specify a testing frequency based on results of the SV 003 VOC testing (required by this permit) and MPCA guidance. Future performance tests based on year (12-month), 36-month, and 60-month intervals, or as applicable, shall be required on written approval by the MPCA per Minn. R. 7017.2020, subp. 1.	SV003
Testing Frequency Plan	due 60 days after Performance Test for volatile organic compound (VOC) emissions. The plan shall specify a testing frequency based on results of the VOC testing (required by this permit) and MPCA guidance. Future performance tests based on year (12-month), 36-month, and 60-month intervals, or as applicable, shall be required on written approval by the MPCA per Minn. R. 7017.2020, subp. 1.	SV010

TABLE B: RECURRENT SUBMITTALS

12/14/00

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 004

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Initial Startup of the facility. The first report covers January 1st - June 30th. The second report covers July 1st - 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 1st). To be submitted on a form approved by the Commissioner.	Total Facility

APPENDIX -- Calculation of NO_X Emissions

Facility Name: Agri-Energy, LLC

Permit Number: 13300023-004

Step 1: Calculate monthly NO_X emissions using the following equation:

Equation 1: $(A \times EF_{NG}) + (B \times EF_P) = N$

Where:

A = The quantity of natural gas combusted in the DDGS dryer and the boiler during the previous month, in million cubic feet

B = The quantity of propane combusted in the DDGS dryer and the boiler during the previous month, in gallons

EF_{NG}= The most current AP-42 emission factor for uncontrolled nitrogen oxide emissions from the combustion of natural gas, in tons of NO_X per million cubic feet of natural gas. At the time of permit issuance, the most current AP-42 emission factor is 0.05 tons of NO_X per million cubic feet of natural gas, but may change over the life of this permit.

EF_P= The most current AP-42 emission factor for uncontrolled nitrogen oxide emissions from the combustion of propane, in tons of NO_X per gallon of propane. At the time of permit issuance, the most current AP-42 emission factor is 9.5×10^{-6} tons of NO_X per gallon of propane, but may change over the life of this permit.

N = NO_X emissions, in tons, for the previous month

Step 2: Calculate annual NO_X emissions, using a 12-month rolling sum.

Each month, add together the NO_X emissions from the previous 12 months.

TECHNICAL SUPPORT DOCUMENT
For
DRAFT AIR EMISSION PERMIT NO. 13300023-004

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

1. General Information

1.1. Applicant and Stationary Source Location:

Owner Address	Facility Address (SIC Code: 2869)
Agri-Energy, LLC	Agri-Energy, LLC
PO Box 779	502 South Walnut Avenue
Luverne, Minnesota 56156 Gordon Heber, General Manager (507)283-9297 - phone (507)283-8866 - fax	Luverne, Rock County, Minnesota

1.2. Description Of The Facility

This facility produces fuel ethanol and Distillers Dried Grains with Solubles (DDGS) from corn. Corn is received by truck, and is cleaned, ground, and then fermented to produce a mixture of ethanol and water. After fermentation, pure ethanol is produced by distillation, then is denatured with unleaded gasoline, and stored in tanks prior to shipping. The remaining fermented corn is dried to produce DDGS. The DDGS is stored, and then shipped by truck or railcar.

1.3 Description of the Activities Allowed By This Permit Action

The Permittee has requested an increase in their annual ethanol production limit from 17.25 mmgal/yr to 22 mmgal/yr. All of the emission limits in the current permit (No. 13300023-003) will remain the same. In addition, no physical modifications or changes are allowed by this permit action. Agri-Energy is not physically modifying its facility, but instead has found a more efficient fermentation process (more efficient fermentation enzymes) that allows for more alcohol production per bushel of corn.

The proposed permit requires a repeat of all emission testing in the existing permit to determine compliance at increased ethanol and DDGS production rates (Although Agri-Energy indicates that same amount of corn will be used to make 22 million

gallons of ethanol as 17.25 million gallons of ethanol, and hence the DDGS production will not increase, the permit does not require the use of more efficient enzymes, and therefore, at the standard 1 bushel of corn per 2.4 gallons of ethanol production ratio, more DDGS will be produced when the production limit increases to 22 million gallons per year.). Also, required percentages for pollution control equipment efficiencies are increased in order to meet emission limits at increased corn throughput, and DDGS and ethanol production rates.

1.4. Facility Emissions:

Table 1. Emission Changes Associated With this Permit Action*

Pollutant	Potential to Emit from this Permit Action (lb/hr)	Potential to Emit from this Permit Action (TPY)
PM	(-) 2.30	(-) 10.07
PM_{10}	(-) 1.06	(-) 4.66
SO_2	None	None
NO_x	None	None
VOC	(+) 0.11	(+) 0.45
CO	None	None
Lead	None	None
benzene	(+) 0.002	(+) 0.0088

*See explanation in Section 3 Technical Information

	PM tpy	PM_{10} tpy	SO_2 tpy	NO_x tpy	CO tpy	VOC tpy	HAP tpy
Total Facility Limited Potential Emissions*	90.8	73.5	0.5	93.8	51.2	97.3	0.136
Total Facility Actual Emissions**	38.33	23.65	0.05	8.93	7.51	16.38	NR

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

**1998 Emission Inventory Data

Table 3. Permit Action Classification

Classification	Major/Affected Source	*Synthetic Minor	*Minor
PSD		PM, PM_{10}, NO_x, VOC	SO_2, CO, Pb

NAAR	NA	NA	NA
Part 70 Permit Program		PM_{10}, VOC, NO_x	Total HAP, CO, SO_2,

* 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 Overview of Units Affected by this Permit Action

Table 4. Overview Of Regulatory Changes Made By This Permit Amendment

Subject Item	Applicable Regulations	Comments
FS 005	40 CFR pt. 60 Subp. VV	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry

3. Technical Information

- EMISSION CHANGES: Although emission limits have not changed, emissions of VOC, PM, PM_{10}, and benzene have changed from sources not subject to emission limits. These sources are fugitive emissions from corn receiving (FS 002), DDGS dump pit and loadout (FS 004), truck traffic (FS 001), and the ethanol loading rack (FS 003), evaporative losses from ethanol and gasoline storage tanks (TK 006 – 010), and emissions from DDGS piling in the DDGS storage building (SV 013). AP-42 emission factors for grain handling have changed since the 1998 PER 003 issuance, and the TANKS program used to calculate tank storage losses has been updated. As a result, the calculated corn/DDGS fugitive emissions have actually decreased because the change in emission factors offsets the increased corn/DDGS throughput. See attached calculations of emission changes and corrected calculations for grain handling and hammermilling.

- CONTROL EQUIPMENT EFFICIENCIES: All control equipment efficiencies have been revised to reflect increased throughputs and production rates. See attached calculations for control and collection efficiencies.

- PERFORMANCE TESTING: All performance testing requirements from PER 003 have been retained and updated. It is necessary to repeat all testing due to the increased throughput and production rates of grain and ethanol, respectively.

- NOx EMISSION FACTORS: The NOx emission factors for NG and LPG in the additional appendix material have not changed, so the emission factors from the additional appendix material for the 1998 major amendment permit have been retained .

- ENVIRONMENTAL REVIEW: Environmental Review required by Minn. R. 4410.4300, subp. 5.B. does not apply to this permitting action because this is not a project in the scope of environmental review because no construction or expansion is occuring at the facility.

- NSPS PART 60 SUBPART VV: The requirements of 40 CFR part 60 subpart VV have been inserted because a September 8, 1998, EPA memorandum indicates that the exemption for "beverage alcohol" described in 40 CFR § 60.480(d) does not apply to biomass-produced alcohol (ethanol) used for fuel. The September 8, 1998, memorandum supersedes the October 7, 1996, EPA memorandum with respect to subpart VV.

- CHANGES MADE AND COMMENTS RECEIVED DURING PUBLIC NOTICE: The Minnesota Department of Health requested requirements be inserted for the submittal of an emission characterization plan and report of the emissions from the facility. MDH will use the report to conduct a Health Consultation of the facility's emissions. MDH is starting to take a closer look at the health risks from emissions from ethanol facilities. The permit requires submittal of a plan to MDH describing how the permittee will identify, quantify, and chemically characterize emissions from all sources, including fugitive, at the facility. In addition, the permit requires submittal of a report on the identified, characterized, and quantified emissions.

  Also, a comment petition was received on December 7, 2000, from Concerned Citizens From Luverne, Minnesota. The petition letter requested that the proposed production increase (to 22 mmgal/yr) be postponed until the effect of the new 180 foot tall dryer stack on odor reduction can be determined. The contact person for the petition was informed that the emission characterization plan requested by MDH, along with MDH's subsequent Health Consultation, should address this issue. However, the permit can not be withheld due to odors because odors are not regulated by the MPCA. On December 13, 2000, the contact person indicated by voice mail that it was OK to issue the permit.

4. Conclusion

Based on the information provided by Agri-Energy, LLC, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13300023-004 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: Marshall M. Cole

Attachments: Calculation of emission changes, control/collection efficiencies, and revised calculations for grain handling and hammermilling.