

AIR EMISSION PERMIT NO. 13300023- 003

IS ISSUED TO

AGRI-ENERGY, LLC

502 South Walnut

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 applications:

Permit Type	Application Date
Total Facility Operating Permit	01/17/97
Administrative Amendment	12/30/97
Major Amendment	05/07/98

This permit authorizes the Permittee to operate and construct the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit 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: July 16, 1998

Expiration: Permit does not expire
All Title I Conditions do not expire.

Michael J. Sandusky
Division Manager
Air Quality Division

for Peder A. Larson
Commissioner
Minnesota Pollution Control Agency

TLV:lao

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

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

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

PERMIT SHIELD:

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

The permit shield, however does not apply to:

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

FACILITY DESCRIPTION:

Agri-Energy, LLC is a fuel alcohol production plant to be located on Walnut Street in Luverne, Rock County, Minnesota. The plant will produce up to 17.25 million gallons of ethanol per year. 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 total particulate matter, particulate matter smaller than ten microns, volatile organic compounds, and nitrogen oxides 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

07/16/98

Facility Name: AGRI-ENERGY LLC
 Permit Number: 13300023 - 003

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

Subject Item:	Total Facility
What to do	Why to do it
Production: less than or equal to 17250000 gallons/year using 12-month Rolling Sum of ethanol (200 proof, prior to addition of denaturant). During the first 11 months of operation, ethanol production is limited to 1,437,500 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)
Shutdowns: Notify the Commissioner at least 24 hours in advance of a planned shutdown, or as soon as possible after an unplanned shutdown of any process or control equipment, if the shutdown would cause an increase in the emission of any regulated air pollutant. At the time of notification, notify the Commissioner of the cause of the shutdown and the estimated duration. Notify the Commissioner again when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdowns: Notify the Commissioner within 24 hours after a breakdown of more than one hour duration of any process or control equipment if the breakdown causes an increase in the emission of any regulated air pollutant. At the time of notification or as soon thereafter as possible, the Permittee shall also notify the Commissioner of the cause of the breakdown and the estimated duration. Notify the Commissioner again when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, such as for system breakdowns, repairs, calibration checks, and zero and span adjustments (as applicable). Monitoring records should reflect any such periods of process shutdown.	Minn. R. 7007.0800, subp. 4(D)
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of 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
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Do not cause or permit a building or its appurtenances or an open area to be constructed, used, repaired, or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne.	Minn. R. 7011.0150
Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises, to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

Subject Item: GP 001 Boiler & Dryer fuel use

Associated Items: EU 015 DDGS Dryer/Burner

EU 018 Boiler

SV 004 DDGS Dryer

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 GP001 NOx emissions for the previous month, and the GP 001 NOx emissions from the previous 12 months (12-month rolling sum). To calculate the monthly NOx emissions, use the recordkeeping requirements described below and Equation 1 as described 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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

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

What to do	Why to do it
Operation and Maintenance of Fabric Filter: The Permittee shall operate and maintain the fabric filter according to the control equipment manufacturer's specifications.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 14
Visible Emissions: The Permittee shall check the outlet of each baghouse (SV 001 and SV 002) for any visible emissions, once each day of operation during daylight hours. Record the time and date of the inspection, and whether or not any visible emissions were observed.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subp. 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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

Subject Item: SV 001 Grain/DDGS Handling

- 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

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 72.3 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 93.1 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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

Subject Item: SV 002 Hammermill

Associated Items: EU 008 Hammermill/Belt Scale

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 91 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 95.5 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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

Subject Item: SV 003 Fermentation scrubber

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 95.8 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
Initial Performance Test: due 180 days after Initial Startup of control device (CE 003) to measure volatile organic compound emissions.	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 Pre-test Meeting: due 7 days before Initial Performance Test	Minn. R. 7017.2030, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

Subject Item: SV 004 DDGS Dryer

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
Initial Performance Test: due 180 days after Initial Startup of DDGS dryer to measure emissions of total particulate matter	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 180 days after Initial Startup of DDGS dryer to measure emissions of particulate matter <10 microns.	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
Initial Performance Test: due 180 days after Initial Startup of the DDGS dryer, to measure volatile organic compound emissions.	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
Initial Performance Test: due 180 days after Initial Startup of DDGS dryer to measure opacity.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Initial Performance Test	Minn. R. 7017.2030, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

Subject Item: SV 010 Distillation scrubber

- 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 97.3 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
Initial Performance Test: due 180 days after Initial Startup of control device (CE005) to measure volatile organic compound emissions.	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 Pre-test Meeting: due 7 days before Initial Performance Test	Minn. R. 7017.2030, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

Subject Item: SV 014 Cooling cyclone

Associated Items: EU 024 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
Initial Performance Test: due 180 days after Initial Startup of cooling cyclone to measure emissions of total particulate matter	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 180 days after Initial Startup of cooling cyclone to measure emissions of particulate matter <10 micron.	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
Initial Performance Test: due 180 days after Initial Startup of cooling cyclone to measure opacity.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Initial Performance Test	Minn. R. 7017.2030, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

Subject Item: SV 015 Grain Dryer**Associated Items:** EU 029 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)

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

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. 7011.1570
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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

Subject Item: EU 029 Grain dryer

Associated Items: SV 015 Grain Dryer

What to do	Why to do it
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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

Subject Item: FS 001 Facility 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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

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

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

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 B: SUBMITTALS

07/16/98

Facility Name: AGRI-ENERGY LLC
Permit Number: 13300023 - 003

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

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

Send any application for a permit or permit amendment to:

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

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

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

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

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

What to send	When to send	Portion of Facility Affected
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup	CE003, CE005, EU015, EU018, EU024, TK006, TK007, TK009, TK010
Notification of the Anticipated Date of Initial Startup	due 30 days before Anticipated Date of Initial Startup but not more than 60 days prior to such date.	EU018, TK006, TK007, TK009, TK010
Notification of the Date Construction Began	due 30 days after Start Of Construction	EU018, TK006, TK007, TK009, TK010
Performance Test Notification (written)	due 30 days before Initial Performance Test	SV003, SV004, SV010, SV014
Performance Test Plan	due 30 days before Initial Performance Test	SV003, SV004, SV010, SV014
Performance Test Report - Microfiche Copy	due 105 days after Initial Performance Test	SV003, SV004, SV010, SV014
Performance Test Report	due 45 days after Initial Performance Test	SV003, SV004, SV010, SV014
Report	due 15 days after Initial Startup describing the control equipment and certifying that the control equipment meets the specifications of Section 60.112b(a)(1). This report shall be an attachment to the Notification of Actual Date of Initial Startup.	TK009, TK010
Testing Frequency Plan	due 60 days after Initial Performance Test for total particulate matter and particulate matter <10 microns emissions. The plan shall specify a testing frequency using the test data and MPCA guidance. Future performance tests based on year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required on written approval of MPCA per Minn. R. 7017.2020, subp. 1.	SV014
Testing Frequency Plan	due 60 days after Initial Performance Test for total particulate matter, particulate matter <10 microns and volatile organic compounds emissions. The plan shall specify a testing frequency using the test data and MPCA guidance. Future performance tests based on year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required on written approval of MPCA per Minn. R. 7017.2020, subp.1.	SV004
Testing Frequency Plan	due 60 days after Initial Performance Test for volatile organic compound emissions. The plan shall specify a testing frequency using the test data and MPCA guidance. Future performance tests based on year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required on written approval of MPCA per Minn. R. 7017.2020, subp. 1.	SV003
Testing Frequency Plan	due 60 days after Initial Performance Test for volatile organic compound emissions. The plan shall specify a testing frequency using the test data and MPCA guidance. Future performance tests based on year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required on written approval of MPCA per Minn. R. 7017.2020, subp. 1.	SV010

TABLE B: RECURRENT SUBMITTALS

07/16/98

Facility Name: AGRI-ENERGY LLC

Permit Number: 13300023 - 003

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: 13300023-003

Step 1: Calculate NO_x emissions for the previous month, 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. 13300023-003

This technical support document is intended for all parties interested in the permit. The purpose of this document is to set forth the legal and factual basis for the 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 P.O. Box 779 Luverne, Minnesota 56156 Gordon Heber, General Manager (507)283-9297 - phone (507)283-8866 - fax	Agri-Energy, LLC 502 South Walnut Avenue Luverne, Rock County, Minnesota

1.2. Description Of The Permit Action

The Permittee has requested that the allowed ethanol production in their permit be increased to 17,250,000 gallons per year (prior to addition of denaturant). Associated with this change are increases in emission limits at several sources. The Permittee also plans to add a grain dryer and a bio-gas flare to the existing plant design.

The permit contains Title I conditions limiting the air emissions to less than 100 tons per year for each criteria pollutant, and this amendment allows changes to those limits. Thus, the permit action is a major amendment. The emissions after the modification will remain below 100 tpy, so facility will continue to be considered a non-major source under 40 CFR 70, Minn. R. 7007.0200, and 40 CFR 52.21.

An Environmental Assessment Worksheet (EAW) for is not required for this project, since the increase in air emissions is less than 100 tpy, and the increase in allowed ethanol production is less than 5 million gallons. (Previously allowed ethanol production was 15 million gallons, so the increase is 2.25 million gallons).

1.3. Description Of Changes Made with this Permit Amendment

A. Changes to the content of the Permit

1. The annual ethanol production limit was increased.
2. The hourly VOC emission rates for SV003, SV004, and SV010 were increased.
3. The hourly PM and PM₁₀ emission rate for SV014 were increased.

4. The requirement to test NO_x emissions from the boiler and the DDGS dryer was eliminated, for two reasons. First, the permittee proposes an annual NO_x emission limit from the boiler and dryer combined. Monthly NO_x calculations are now included in the permit, under GP001. Second, the emission factors for natural gas combustion were revised, showing a lower quantity of NO_x emissions from natural gas combustion than was used in the original permit.
 5. The grain dryer and bio-gas flare were added to the permit, with associated limits.
 6. TK002 and TK003 (Liquifaction tanks) are not exhausted to CE005, as portrayed in the original permit.
- B. Changes to the format of the permit (for consistency with similar ethanol plant permits)
7. GP002 (Baghouse requirements), GP003 (scrubber requirements), and GP004 (cyclone requirements) were added and requirements for CE001, CE002, CE003, CE004, CE005, and EU024 individually were eliminated.
 8. GP005 was added for storage tanks which are subject to additional recordkeeping requirements under 40 CFR 60, Subpart Kb.
 9. GP006 was added for storage tanks which are subject to the requirement to use internal floating roofs under 40 CFR 60, subpart Kb.
 10. Control efficiencies were moved to the SV level.
 - 11.

1.3.5. Description Of Changes Made since Beginning Public Notice

None

1.4. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:
(details of calculations are attached)

Emission Unit Description	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	VOC tpy	CO tpy	Benzene tpy	Total HAPs
PER 001 TOTAL	89.2	77.1	4.8	83.0	76.4	17.8	0.1255	0.1255
PER 003 TOTAL	98.5	77.2	0.5	93.8	91.9	51.2	0.1304	0.1304

- Changes are due to 3 primary items:
1. Increases in allowed emissions due to design changes
 2. Changes to natural gas combustion emission factors
 3. Miscellaneous corrections to original calculation methods.

Table 2. Facility and Permit Classification

Classification	Major	Synthetic Minor	Minor
PSD	none	PM, PM ₁₀ , VOC, NO _x ,	SO ₂ , CO, Pb
NAAR	N/A	N/A	N/A
Title V Permit Program	none	PM ₁₀ , VOC, NO _x ,	SO ₂ , CO, Pb, HAPs

2. Regulatory and/or Statutory Basis

1. Overview of Facility

Item	Applicable Regulations	Comments
GP001	40 CFR 52.21, 40 CFR 70.2, Minn. R. 7007.0200	Limit on NO _x emissions to keep facility minor for PSD and Part 70. Monthly calculations to be done to show emissions on a 12-month rolling sum basis.
EU018, TK006, TK007, TK009, TK010	40 CFR 60.7	Notification of initial startup for NSPS affected facilities (TK008 is exempt from NSPS Subpart A, under 40 CFR 60.110b(b); TK006, TK007, TK009, and TK010 are not exempt, because they are larger than 151 m ³ , and the estimated maximum vapor pressure is >3.5 kPa.)
CE003, CE005, EU015, EU024	Minn. Stat. 116.07	Notification of initial startup for non-NSPS affected facilities, to determine dates for initial performance tests
SV015	Minn. R. 7011.0610	Grain dryer is not subject to Minn. R. 7011.1005, subp. 3(D) because it is an uncontrolled source. It is subject to the direct heating equipment standard.

3. Additional Information

- Rolling sums - a 12-month rolling sum can be used to calculate compliance with the annual ethanol production limit. This is consistent with the requirements contained in permits issued to other ethanol plants in Minnesota over the past several years. It is justified because of the lack of predictability in the availability and quality of raw material (corn). While the facility is located in an area where corn is commonly grown and available, there is variability in the growing season and conditions such that in a given year, there may be a large crop of high quality corn, which would enable the facility to receive a large amount of corn at harvest time, and/or produce a larger quantity of ethanol from a given amount of corn; or a smaller or poorer quality crop, which could result in less corn being available at harvest time, or a lesser quantity of ethanol that can be produced from a given amount of corn.
- All performance testing will be done in accordance with EPA test methods.

4. Conclusion

Based on the information provided by Agri-Energy LLC, the MPCA has reasonable assurance that the proposed construction and operation of the emission facility, as described in Air Emission Permit No. 13300023-003 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Permit Team: T. Volkmeier, M. Cole, D. Vaaler, C. Hernandez, R. Land.

Attachments: Emission calculations and Facility Description