



AIR EMISSION PERMIT NO. 13300023- 009
Major Amendment

IS ISSUED TO

GEVO / AGRI-ENERGY LLC

GEVO / AGRI-ENERGY LLC
502 Walnut Avenue South
Luverne, Rock County, MN 56156

The emission units, control equipment and emission stacks at the stationary source authorized in this permit amendment are as described in the Permit Applications Table.

This permit amendment supersedes Air Emission Permit No. 13300023-008 and authorizes the Permittee to operate and modify 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.

Unless otherwise indicated, all the Minnesota rules cited as the origin of the permit terms are incorporated into the State Implementation Plan (SIP) under 40 CFR § 52.1220 and as such are enforceable by U.S. Environmental Protection Agency (EPA) Administrator or citizens under the Clean Air Act.

Permit Type: State; Limits to Avoid Part 70; Limits to Avoid New Source Review

Operating Permit Issue Date: July 31, 1997

Major Amendment Issue Date: May 17, 2011

Expiration Date: permit does not expire – Title I Conditions do not expire.

David L. Beil
for Don Smith, P.E., Manager
Air Quality Permits Section
Industrial Division

for Paul W. Aasen
Commissioner
Minnesota Pollution Control Agency

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC
 Permit Number: 13300023 - 009

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
<p>Applicability of 40 CFR 52.21 to greenhouse gases (GHG) if the Permittee cannot commence construction before July 1, 2011 and US EPA does not promulgate the deferral of biogenic emissions proposed in the Federal Register on March 21, 2011:</p> <p>The Permittee may avoid PSD by demonstrating, prior to commencing construction, that the increase in GHG, or the net increase in GHG, is less than 75,000 tons per year.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>PERMIT APPENDICES</p>	<p>hdr</p>
<p>This permit contains appendices as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in Appendix I for calculation of NOx emissions.</p> <p>Modeling parameters in Appendix II are included for reference only and compliance with these parameters is achieved through meeting the Modeling requirements on Page A-2 that reference Appendix II.</p>	<p>MR</p>
<p>OPERATIONAL REQUIREMENTS</p>	<p>hdr</p>
<p>Carbon Dioxide Equivalent: less than or equal to 90,000 tons/year using 12-month Rolling Sum for nonbiogenic emissions due to combustion of natural gas and propane</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Recordkeeping: Following the end of each calendar month, the Permittee shall record the natural gas used (in millions of cubic feet, MMscf) and the propane used (in gallons).</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Recordkeeping: The Permittee shall calculate and record the CO₂e emitted from fuel combustion each month using the records above and the following equation:</p> $\text{CO}_2\text{e} = \text{natural gas usage}(\text{MMScf}) * \text{HHV}(\text{MMBtu}/\text{MMScf}) * 0.059(\text{ton CO}_2\text{e}/\text{MMBtu}) + \text{propane usage}(\text{gallons}) * \text{HHV}(\text{MMBtu}/\text{gallon}) * 0.068(\text{ton CO}_2\text{e}/\text{MMBtu})$ <p>The Permittee shall calculate and record the 12-month rolling sum of CO₂e.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Production: less than or equal to 26000000 gallons/year using 12-month Rolling Sum of ethanol-equivalent (200 proof ethanol, prior to addition of denaturant).</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Recordkeeping: by the 15th day of each month, calculate and record the gallons of ethanol and isobutanol produced during the previous month and the gallons of ethanol-equivalent produced during the previous 12 months (12-month rolling sum).</p> <p>Ethanol-equivalent is calculated as follows:</p> $\text{Ethanol-equivalent (gallons)} = \text{ethanol produced (gallons)} + \text{isobutanol produced (gallons)} * 26/22$	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)</p>
<p>Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.</p>	<p>Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

<p>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.</p>	<p>Minn. R. 7011.0020</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 9(A)</p>
<p>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.</p>	<p>Minn. R. 7011.0150</p>
<p>PERFORMANCE TESTING</p>	<p>hdr</p>
<p>Performance Test Notifications and Submittals:</p> <p>Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.</p> <p>Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test</p> <p>The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.</p>	<p>Minn. R. 7017.2030, subps. 1-4 and Minn. R. 7017.2035 subps. 1 and 2</p>
<p>MONITORING REQUIREMENTS</p>	<p>hdr</p>
<p>Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>MODELING REQUIREMENTS FOR PM10</p>	<p>hdr</p>
<p>The parameters used in PM10 modeling for permit number 13300023-009 are listed in Appendix II of this permit.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080</p>
<p>Modeling Triggers: For changes that do not require a permit amendment or that require a minor permit amendment, and that affect any modeled parameter or emission rate documented in Appendix II, or an addition to the information documented in Appendix II, a Remodeling Submittal requirement is not triggered. The Permittee shall keep updated records on site of all parameters and emission rates. The Permittee shall submit any changes to parameters and emission rates with the next required remodeling submittal.</p> <p>For changes that require a moderate or major permit amendment and affect any modeled parameter or emission rate, a Remodeling Submittal requirement is triggered. The Permittee shall include previously made changes to parameters and emission rates that did not trigger a remodeling submittal with this modeling submittal.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080</p>
<p>Remodeling Submittal: The Permittee must submit to the Commissioner for approval changes meeting the above criteria and must wait for a written approval (in the form of an issued permit amendment) before making such changes. The information submitted must include, for stack and vent sources, source emission rate, location, height, diameters, exit velocity, exit temperature, discharge direction, use of rain caps or rain hats, and, if applicable, locations and dimensions of nearby buildings. For non-stack/vent sources, this includes the source emission rate, location, size and shape, release height, and, if applicable, any emission rate scalars, and the initial lateral dimensions and initial vertical dimensions and adjacent building heights.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC
 Permit Number: 13300023 - 009

<p>Remodeling Submittal, continued: The plume dispersion characteristics due to the revisions of the information must be equivalent to or better than the dispersion characteristics modeled March 2011. The Permittee shall demonstrate this equivalency in the proposal. If the information does not demonstrate equivalent or better dispersion characteristics, or if a conclusion cannot readily be made about the dispersion, the Permittee must submit full remodeling.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080, continued</p>
<p>MODELING REQUIREMENTS FOR PM2.5</p>	<p>hdr</p>
<p>The parameters used in PM2.5 modeling for permit number 13300023-009 are listed in Appendix II of this permit.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080</p>
<p>Modeling Triggers: For changes that do not require a permit amendment and affect any modeled parameter or emission rate documented in Appendix II, or are an addition to the information documented in Appendix II, a Remodeling Submittal requirement is not triggered at the time of the change. The Permittee shall keep updated records on site of all parameters and emission rates. The Permittee shall submit any changes to parameters and emission rates with the next required Remodeling Submittal.</p> <p>For changes that require a minor, moderate, or major permit amendment and affect any modeled parameter or emission rate documented in Appendix II, or are an addition to the information documented in Appendix II, a Remodeling Submittal requirement is triggered. The Permittee shall include previously made changes to parameters and emission rates that did not trigger a Remodeling Submittal.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080</p>
<p>Remodeling Submittal: The Permittee must submit to the Commissioner for approval changes meeting the above criteria and must wait for a written approval before making such changes. For minor amendments, written approval of the modeling may be given before permit issuance; however, this approval applies only to the modeling and not to any other changes. The information submitted must include, for stack and vent sources, source emission rate, location, height, diameters, exit velocity, exit temperature, discharge direction, use of rain caps or rain hats, and, if applicable, locations and dimensions of nearby buildings. For non-stack/vent sources, this includes the source emission rate, location, size and shape, release height, and, if applicable, any emission rate scalars, and the initial lateral dimensions and initial vertical dimensions and adjacent building heights.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080</p>
<p>Remodeling Submittal, continued: The plume dispersion characteristics due to the revisions of the information must be equivalent to or better than the dispersion characteristics modeled in March 2011. The Permittee shall demonstrate this equivalency in the proposal. If the information does not demonstrate equivalent or better dispersion characteristics, or if a conclusion cannot readily be made about the dispersion, the Permittee must submit full remodeling.</p>	<p>Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080, continued</p>
<p>RECORDKEEPING</p>	<p>hdr</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 5(B)</p>
<p>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).</p>	<p>Minn. R. 7007.0800, subp. 5(C)</p>
<p>When the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. For nonexpiring permits, these records shall be kept for a period of five years from the date that the change was made. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format.</p>	<p>Minn. R. 7007.1200, subp. 4</p>
<p>REPORTING/SUBMITTALS</p>	<p>hdr</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

<p>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.</p>	<p>Minn. R. 7019.1000, subp. 3</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 2</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 4</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 1</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 1</p>
<p>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.</p>	<p>Minn. R. 7007.1150 through Minn. R. 7007.1500</p>
<p>Emissions Inventory Report: due 91 days after end of each calendar year (April 1st). To be submitted on a form approved by the Commissioner.</p>	<p>Minn. R. 7019.3000 through Minn. R. 7019.3010</p>
<p>Emission Fees: due 60 days after receipt of an MPCA bill.</p>	<p>Minn. R. 7002.0005 through Minn. R. 7002.0095</p>
<p>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).</p>	<p>Minn. R. 7007.1400, subp. 1(H)</p>
<p>The Permittee is required to submit a Risk Management Plan (RMP) under the federal rule, 40 CFR pt. 68. Each owner or operator of a stationary source, at which a regulated substance is present above a threshold quantity in a process, shall design and implement an accidental release prevention program. A complete RMP must be submitted to the RMP Reporting Center, PO Box 3346, Merrifield, VA 22116. RMP submittal information may be obtained at http://www.epa.gov/swercepp or by calling 1-800-424-9346. These requirements must be complied with no later than the latest of the following dates: (1) June 21, 1999; (2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or (3) The date on which a regulated substance is first present above a threshold quantity in a process.</p>	<p>40 CFR pt. 68</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-5

05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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
Requirements moved to CE001 and CE002	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-6

05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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
Requirements moved to CE003 and CE005	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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
Operate and maintain the multiclone to achieve a collection efficiency for Total Particulate Matter: greater than or equal to 90 percent collection efficiency	Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Pressure Drop: greater than or equal to 0.5 inch of water column and less than or equal to 5.5 inches of water column, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours when in operation.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Record pressure drop at each cyclone once each day of operation.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 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 this permit, 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 and Minn. R. 7007.3000; 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

A-8

05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: GP 005 Storage Tanks Subject to NSPS Kb Records Only**Associated Items:** TK 006 Isobutanol or Ethanol, 95%

TK 007 Isobutanol or Ethanol, 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

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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

Associated Items: TK 009 Isobutanol or Ethanol, 95% with Unleaded Gas, 5%

TK 010 Isobutanol or Ethanol, 95% with Unleaded Gas, 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 10 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

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: GP 008 Boilers

Associated Items: EU 018 Boiler No. 1

EU 033 Boiler No. 2

What to do	Why to do it
<p>Recordkeeping: Record and maintain records of the amount of each fuel combusted in boiler no. 1 (EU018) and boiler No. 2 (EU033) on a monthly basis. These records may consist of purchase records or receipts.</p> <p>Additional requirements for propane follow.</p>	<p>40 CFR Section 60.48c(g)(2) and (i); Minn. R. 7011.0570</p>
<p>Fuel Burned: Natural gas and propane only.</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2</p>
<p>Operating Hours: less than or equal to 1000 hours/year using 12-month Rolling Sum with propane as fuel. This limit applies individually to each boiler in GP008.</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Recordkeeping: At the end of the last day of each month, record the number of hours the boiler was operated with propane fuel during the month.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Recordkeeping - By the 15th day of each month, calculate and record the number of hours the boiler has operated with propane fuel during the previous month and during the previous 12 months (12-month rolling sum).</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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
 - EU 031 bushel corn bin
 - EU 036 Grain bin
 - GP 002 Baghouse Monitoring Requirements

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.37 lbs/hour using 3-hour Average	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; most stringent, meets limit required by Minn. R. 7011.1005
PM < 10 micron: less than or equal to 0.37 lbs/hour using 3-hour Average	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200.
PM < 2.5 micron: less than or equal to 0.37 lbs/hour using 3-hour Average	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 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 AND PERIODIC MONITORING REQUIREMENTS See CE001	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: SV 002 Hammermill (CE 002)

Associated Items: EU 008 Hammermill/Belt Scale

EU 045 Hammermill/Belt Scale

GP 002 Baghouse Monitoring Requirements

What to do	Why to do it
REPLACEMENT OF HAMMERMILL Permit action 009 authorizes the hammermill included in EU008 to be replaced with a new hammermill. EU045 identifies the new hammermill/weigh belt unit.	hdr
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.22 lbs/hour using 3-hour Average	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; most stringent, meets limit required by Minn. R. 7011.1005
PM < 10 micron: less than or equal to 0.22 lbs/hour using 3-hour Average	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
PM < 2.5 micron: less than or equal to 0.22 lbs/hour using 3-hour Average	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 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 AND PERIODIC MONITOING REQUIREMENTS See CE002	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: SV 003 Fermentation scrubber (CE 003)

- Associated Items:**
- EU 025 Fermenter
 - EU 026 Fermenter
 - EU 027 Fermenter
 - EU 028 Beer Well
 - EU 035 Fermenter #4
 - EU 037 Isobutanol unit 37
 - EU 038 Isobutanol unit 38
 - EU 039 Isobutanol unit 39
 - EU 040 Isobutanol unit 40
 - EU 041 Isobutanol unit 41
 - EU 042 Isobutanol unit 42
 - EU 043 Isobutanol unit 43
 - EU 046 Isobutanol unit 46
 - EU 047 Isobutanol unit 47
 - EU 048 Isobutanol unit 48
 - EU 049 Isobutanol unit 49

What to do	Why to do it
CE003 routed to CE007 After issuance of permit 009, the exhaust gases from CE003 will normally be routed to CE007 (thermal oxidizer) and exhaust through SV004. Exhaust from CE003 may also be vented through SV003 when CE007 is not operating.	hdr
A. EMISSION LIMITS	hdr
Volatile Organic Compounds: less than or equal to 7.0 lbs/hour as total mass of VOC	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
B. POLLUTION CONTROL AND PERIODIC MONITORING REQUIREMENTS See CE003	hdr
C. TESTING REQUIREMENTS	hdr
None required since emissions will normally vent through CE007 and SV004. Tests will be conducted at SV004.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: SV 004 Thermal Oxidizer (CE007)

- Associated Items:**
- EU 009 Beer Stripper
 - EU 010 Rectifier
 - EU 011 Side Stripper
 - EU 012 Molecular Sieve
 - EU 014 Evaporator
 - EU 015 DDGS Dryer/Burner
 - EU 025 Fermenter
 - EU 026 Fermenter
 - EU 027 Fermenter
 - EU 028 Beer Well
 - EU 034 Regenerative Thermal Oxidizer
 - EU 035 Fermenter #4
 - EU 037 Isobutanol unit 37
 - EU 038 Isobutanol unit 38
 - EU 039 Isobutanol unit 39
 - EU 040 Isobutanol unit 40
 - EU 041 Isobutanol unit 41
 - EU 042 Isobutanol unit 42
 - EU 043 Isobutanol unit 43
 - EU 044 Isobutanol unit 44
 - EU 046 Isobutanol unit 46
 - EU 047 Isobutanol unit 47
 - EU 048 Isobutanol unit 48
 - EU 049 Isobutanol unit 49

What to do	Why to do it
<p>MODIFICATION AUTHORIZED BY PERMIT ACTION 009</p> <p>After issuance of permit 009, the exhaust from CE003 and CE005 will normally be routed to CE007 (thermal oxidizer) and exhaust through SV004. When the thermal oxidizer is not operating, exhaust from CE003 and CE005 will be through SV003 and SV010.</p>	<p>hdr</p>
<p>A. EMISSION LIMITS</p>	<p>hdr</p>
<p>Total Particulate Matter: less than or equal to 5.0 lbs/hour using 3-hour Average</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; most stringent, meets limit required by Minn. R. 7011.0610, subp. 1(A)(1)</p>
<p>PM < 10 micron: less than or equal to 5.0 lbs/hour using 3-hour Average</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>PM < 2.5 micron: less than or equal to 5.0 lbs/hour using 3-hour Average</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

<p>Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.</p> <p>This opacity limit is met by maintaining the thermal oxidizer temperature as specified under CE007. Monitoring for this opacity limit consists of the continuous temperature monitoring required for the thermal oxidizer (CE007, EU034).</p>	<p>Minn. R. 7011.0610, subp. 1(A)(2)</p>
<p>Volatile Organic Compounds: less than or equal to 4.0 lbs/hour as total mass of VOC</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>B. POLLUTION CONTROL REQUIREMENTS</p> <p>See GP004 and CE007</p>	<p>hdr</p>
<p>C. TESTING REQUIREMENTS</p>	<p>hdr</p>
<p>Performance Test: due before end of each 60 months starting 01/04/2007 to measure emission of total particulate matter</p>	<p>Minn. R. 7017.2020, subp. 1</p>
<p>Performance Test: due before end of each 60 months starting 01/04/2007 to measure emission of particulate matter smaller than 10 microns (PM10)</p>	<p>Minn. R. 7017.2020, subp. 1</p>
<p>Performance Test: due before end of each 36 months starting 01/04/2007 to measure emission of VOC</p>	<p>Minn. R. 7017.2020, subp. 1</p>
<p>Performance Test: due before end of each 36 months starting 01/04/2007 to measure VOC destruction efficiency</p>	<p>Minn. R. 7017.2020, subp. 1</p>
<p>D. EMISSION UNIT OPERATION (EU 015)</p>	<p>hdr</p>
<p>Process Throughput: less than or equal to 21,500 lbs/hour using 24-hour Block Average of dryer solids. This limit is applicable to the DDGS dryer (EU 015). Downtime of 15 or more minutes is not to be counted as operating time.</p> <p>This process throughput limit may not be exceeded unless a new limit is established pursuant to Minn. R. 7017.2025, subp. 3, based on the throughput during the most recent MPCA approved performance test where compliance with an emission limit for EU 015 is demonstrated.</p>	<p>Minn. R. 7017.2025</p>
<p>Recordkeeping of Throughput (EU 015): Each day, record the corn processed for the previous day, in pounds per day. Compute the DDGS produced as follows:</p> <p>DDGS = corn processed (bushels) * 18 (lb DDGS/bushel)</p> <p>Divide the total amount of DDGS produced by the hours of dryer operating time. Do not count downtime of 15 minutes or more as operating time.</p>	<p>Minn. R. 7007.0800, subp. 5</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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

EU 044 Isobutanol unit 44

What to do	Why to do it
CE005 routed to CE007 After issuance of permit 009, the exhaust gases from CE005 will normally be routed to CE007 (thermal oxidizer) and exhaust through SV004. Exhaust from CE005 may also be vented through SV010 when CE007 is not operating.	hdr
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 2.54 lbs/hour as total mass of VOC	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
B. POLLUTION CONTROL AND PERIODIC MONITORING REQUIREMENTS See CE005	hdr
C. TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 02/16/2005 to measure emission of VOC	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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 0.80 lbs/hour using 3-hour Average	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; most stringent, meets limit required by Minn. R. 7011.0610, subp. 1(A)(1)
PM < 10 micron: less than or equal to 0.80 lbs/hour using 3-hour Average	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
PM < 2.5 micron: less than or equal to 0.12 lbs/hour using 3-hour Average	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1(A)(2)
Volatile Organic Compounds: less than or equal to 1.2 lbs/hour as total mass of VOC	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
B. TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 02/19/2004 to measure emission of total particulate matter	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months starting 02/19/2004 to measure emission of particulate matter smaller than 10 microns (PM10)	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-18

05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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)
Monitoring: Each operating day, observe and record the presence or absence of visible emissions from the flare. Absence of visible emissions is an indicator of opacity less than 20 %.	Minn. R. 7007.0800, subp. 4(D)
Corrective Actions: If visible emissions are observed or if the flare or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall eliminate the visible emissions and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subps. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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 for one six-minute period per hour of not more than 60 percent opacity.	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
<p>Operating Hours: From December 1 to February 29, the dryer may operate only between 5 am and 7 pm each day.</p> <p>Dryer operation is prohibited from March 1 to August 31.</p> <p>From September 1 to November 30, the dryer may operate 24 hours per day.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. ch. 7009</p>
<p>Recordkeeping: Daily record the startup and shutdown time of the dryer, or that the dryer did not operate, or operated 24 hours if allowed by this permit.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
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 - 009

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

- 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
 EU 031 bushel corn bin
 EU 036 Grain bin
 GP 002 Baghouse Monitoring Requirements

What to do	Why to do it
The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for Total Particulate Matter: greater than or equal to 99.3 percent collection efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 10 micron: greater than or equal to 98.2 percent collection efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 2.5 micron: greater than or equal to 92.6 percent collection efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14
Visible Emissions: The Permittee shall check each fabric filter stack for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-21

05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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)
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5, and 14
The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: CE 002 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

Associated Items: EU 008 Hammermill/Belt Scale

EU 045 Hammermill/Belt Scale

GP 002 Baghouse Monitoring Requirements

What to do	Why to do it
The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for Total Particulate Matter: greater than or equal to 99 percent collection efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 10 micron: greater than or equal to 93 percent collection efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 2.5 micron: greater than or equal to 93 percent collection efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Pressure Drop: greater than or equal to 1.0 inches of water column and less than or equal to 4.0 inches of water column	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14
Visible Emissions: The Permittee shall check each fabric filter stack for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
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)
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5, and 14
The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: CE 003 Packed-Gas Adsorption Column

Associated Items: EU 025 Fermenter

EU 026 Fermenter

EU 027 Fermenter

EU 028 Beer Well

EU 035 Fermenter #4

EU 037 Isobutanol unit 37

EU 038 Isobutanol unit 38

EU 039 Isobutanol unit 39

EU 040 Isobutanol unit 40

EU 041 Isobutanol unit 41

EU 042 Isobutanol unit 42

EU 043 Isobutanol unit 43

EU 046 Isobutanol unit 46

EU 047 Isobutanol unit 47

EU 048 Isobutanol unit 48

EU 049 Isobutanol unit 49

GP 003 Scrubber Monitoring Requirements

What to do	Why to do it
The Permittee shall operate and maintain each scrubber at all times that any emission unit controlled by the scrubber is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Volatile Organic Compounds: greater than or equal to 95 percent collection efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 23.3 gallons/minute if emissions are vented to the atmosphere	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Water flow rate: greater than or equal to 10 gallons/minute if emissions are vented to the thermal oxidizer, CE007	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 15 inches of water column	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Flowrate and Pressure Drop: Once each operating day the Permittee shall observe and record the scrubbing liquid flowrate and the pressure drop across the scrubber.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Recordkeeping of Flowrate and Pressure Drop. The Permittee shall record the time and date of each flowrate reading and pressure drop reading, and whether or not the observed flowrate and pressure drop was within the range specified in this permit.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording flowrate and pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when each monitored scrubber is in operation.	Minn. R. 7007.0800, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-24

05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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)
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the scrubber or any of its components are found during the inspections to need repair. Corrective actions shall return the flowrate or pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5, and 14
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5, and 14
The Permittee shall operate and maintain each packed gas absorption column in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-25

05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: CE 004 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones**Associated Items:** EU 015 DDGS Dryer/Burner

GP 004 Cyclone Monitoring Requirements

What to do	Why to do it
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)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: CE 005 Packed-Gas Adsorption Column

Associated Items: EU 009 Beer Stripper

EU 010 Rectifier

EU 011 Side Stripper

EU 012 Molecular Sieve

EU 014 Evaporator

EU 044 Isobutanol unit 44

GP 003 Scrubber Monitoring Requirements

TK 001 Corn Mash (Slurry Tank)

TK 004 Corn Mash (Yeast Tank)

TK 005 Production Rundown Tank - ethanol or isobutanol

What to do	Why to do it
The Permittee shall operate and maintain each scrubber at all times that any emission unit controlled by the scrubber is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Volatile Organic Compounds: greater than or equal to 95 percent collection efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 3.6 gallons/minute	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Pressure Drop: greater than or equal to 1.0 inches of water column and less than or equal to 10 inches of water column	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Flowrate and Pressure Drop: Once each operating day the Permittee shall observe and record the scrubbing liquid flowrate and the pressure drop across the scrubber.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Recordkeeping of Flowrate and Pressure Drop. The Permittee shall record the time and date of each flowrate reading and pressure drop reading, and whether or not the observed flowrate and pressure drop was within the range specified in this permit.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording flowrate and pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when each monitored scrubber is in operation.	Minn. R. 7007.0800, subp. 4
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)
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the scrubber or any of its components are found during the inspections to need repair. Corrective actions shall return the flowrate or pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-27

05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5, and 14
The Permittee shall operate and maintain each packed gas absorption column in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: CE 007 Thermal Oxidizer

- Associated Items:**
- EU 009 Beer Stripper
 - EU 010 Rectifier
 - EU 011 Side Stripper
 - EU 012 Molecular Sieve
 - EU 014 Evaporator
 - EU 015 DDGS Dryer/Burner
 - EU 025 Fermenter
 - EU 026 Fermenter
 - EU 027 Fermenter
 - EU 028 Beer Well
 - EU 034 Regenerative Thermal Oxidizer
 - EU 035 Fermenter #4
 - EU 037 Isobutanol unit 37
 - EU 038 Isobutanol unit 38
 - EU 039 Isobutanol unit 39
 - EU 040 Isobutanol unit 40
 - EU 041 Isobutanol unit 41
 - EU 042 Isobutanol unit 42
 - EU 043 Isobutanol unit 43
 - EU 044 Isobutanol unit 44
 - EU 046 Isobutanol unit 46
 - EU 047 Isobutanol unit 47
 - EU 048 Isobutanol unit 48
 - EU 049 Isobutanol unit 49

What to do	Why to do it
<p>MODIFICATION AUTHORIZED BY PERMIT ACTION 009</p> <p>After issuance of permit 009, the exhaust from CE003 and CE005 will be routed to CE007 (thermal oxidizer) and exhaust through SV004. CE003 and CE005 will continue to be operated as a scrubbers subject to conditions found at CE003 and CE005. When the thermal oxidizer is not operating, CE003 and CE005 will exhaust through SV003 and SV010 respectively.</p>	<p>hdr</p>
<p>The Permittee shall operate and maintain the thermal oxidizer any time that the DDGS dryer (EU015) is in operation.</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14</p>
<p>The Permittee shall operate and maintain the thermal oxidizer so that it achieves a destruction efficiency for Volatile Organic Compounds: greater than or equal to 95 percent destruction efficiency</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14</p>
<p>The permittee shall operate and maintain the thermal oxidizer so that it achieves a destruction efficiency for Total Particulate Matter: greater than or equal to 82.1 percent destruction efficiency</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

<p>Temperature: greater than or equal to 1565 degrees F as a 3-hour rolling average at the combustion chamber outlet, unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new limit shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The limit is final upon issuance of a permit amendment incorporating the change. If the 3-hour rolling average temperature is below the minimum temperature limit, the VOC used during that time shall be considered uncontrolled until the average temperature is above the minimum temperature limit. This shall be reported as a deviation.</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14</p>
<p>The Permittee shall maintain a continuous hard copy readout or computer disk file of the temperature readings and calculated three hour rolling average temperatures for the combustion chamber.</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14</p>
<p>Daily Monitoring: The Permittee shall physically check the temperature recording device at least once each operating day to verify that it is working and recording properly, and maintain a written or computer log of these daily checks.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Monitoring Equipment: The Permittee shall install and maintain thermocouples to conduct temperature monitoring required by this permit. The monitoring equipment must be installed, in use, and properly maintained whenever operation of the monitored control equipment is required.</p>	<p>Minn. R. 7007.0800, subp. 4</p>
<p>Thermocouple Monitoring: The Permittee shall maintain and operate a thermocouple monitoring device that continuously indicates and records the combustion chamber temperature of the thermal oxidizer. The monitoring device shall have a margin of error less than the greater of +/- 0.75 percent of the temperature being measured or +/- 2.5 degrees Celsius. The recording device shall also calculate the three-hour rolling average combustion chamber temperature.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Annual Inspections: At least annually, the Permittee shall inspect the control equipment internal and external system components, including but not limited to the refractory, heat exchanger, and electrical systems. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.</p>	<p>Minn. R. 7007.0800, subp. 4, 5 and 14</p>
<p>Annual Calibration: The Permittee shall calibrate the temperature monitor at least annually and shall maintain a written record of the calibration and any action resulting from the calibration.</p>	<p>Minn. R. 7007.0800, subp. 4, 5, and 14</p>
<p>Corrective Actions: If the temperature is below the minimum specified by this permit or if the thermal oxidizer or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall return the temperature to at least the permitted minimum and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the thermal oxidizer. The Permittee shall keep a record of the type and date of any corrective action taken.</p>	<p>Minn. R. 7007.0800, subp. 4, 5 and 14</p>
<p>Recordkeeping: Record and maintain records of the amount of each fuel combusted in the thermal oxidizer (CE 007, EU034) on a monthly basis. These records may consist of purchase records or receipts.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Fuel Burned: Natural gas and propane only.</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2</p>
<p>Operating Hours: less than or equal to 1000 hours/year using 12-month Rolling Sum with propane as fuel.</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Recordkeeping: At the end of the last day of each month, record the number of hours CE007 was operated with propane fuel during the month.</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>
<p>Recordkeeping - By the 15th day of each month, calculate and record the number of hours CE007 has operated with propane fuel during the previous month and during the previous 12 months (12-month rolling sum).</p>	<p>Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-30

05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Operate and maintain the multiclone to achieve a collection efficiency for Total Particulate Matter: greater than or equal to 90 percent collection efficiency	Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
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TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: FS 001 Truck Traffic

What to do	Why to do it
<p>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.</p>	<p>Minn. R. 7011.0150</p>
<p>Truck Traffic - Daily Limits:</p> <p>Grain Receiving: less than or equal to 180 trucks/day total</p> <p>Grain Receiving: less than or equal to 30 straight trucks/day</p> <p>DDGS/wetcake loadout: less than or equal to 35 trucks/day</p> <p>Denatured Ethanol Loadout: less than or equal to 35 trucks/day</p> <p>Denaturant delivery: less than or equal to 5 trucks/day</p>	<p>Minn. R. ch. 7009</p>
<p>Recordkeeping: The Permittee shall record the total number of each type of truck and tractor described above entering the facility each calendar day and keep these records on-site. Total trucks includes grain receiving (hopper + straight trucks/wagons), DDGS/wetcake loadout, ethanol loadout and denaturant delivery.</p>	<p>Minn. R. ch. 7009</p>
<p>Haul Roads-</p> <p>All roads will be paved.</p> <p>Roads will be swept weekly unless covered in water, ice, or snow, in which case they will be swept the next day not covered with water, ice, or snow.</p> <p>The Permittee shall prevent track-out of dirt onto the facility roadways.</p> <p>The Permittee shall use only salt and not sand for wintertime ice abatement.</p>	<p>Minn. R. ch. 7009</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-32

05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: FS 002 Grain Handling

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

A-33

05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: FS 004 DDGS Handling

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 - 009

Subject Item: FS 005 Tank Valve, Flange, Seal Leaks

What to do	Why to do it
A. STANDARDS: PUMPS	hdr
<p>Pumps in light liquid service:</p> <p>(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 provided in 40 CFR 60.482-1(c) and paragraphs (d), (e), and (f).</p> <p>(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</p>	40 CFR Section 60.482-2 Minn. R. 7011.2900, subp. A
<p>(b)(1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.</p> <p>(2) If there are indications of liquids dripping from the pump seal, a leak is detected.</p> <p>(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.</p> <p>(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.</p>	40 CFR Section 60.482-2(b) and (c) Minn. R. 7011.2900, subp. A
B. STANDARDS: COMPRESSORS	hdr
<p>(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).</p>	40 CFR Section 60.482-3(a) Minn. R. 7011.2900, subp. A
<p>(b) Each compressor seal system shall be:</p> <p>(1) operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or</p> <p>(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</p> <p>(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.</p>	40 CFR Section 60.482-3(b) Minn. R. 7011.2900, subp. A
<p>(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.</p> <p>(d) Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.</p>	40 CFR Section 60.482-3(c) and (d) Minn. R. 7011.2900, subp. A
<p>(e) (1) Each sensor shall be checked daily or shall be equipped with an audible alarm.</p> <p>(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.</p>	40 CFR Section 60.482-3(e) Minn. R. 7011.2900, subp. A
<p>(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.</p>	40 CFR Section 60.482-3(f) Minn. R. 7011.2900, subp. A
<p>(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 provided in 40 CFR 60.482-9 (delay of repair)</p> <p>(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.</p>	40 CFR Section 60.482-3(g) Minn. R. 7011.2900, subp. A
C. STANDARDS: PRESSURE RELIEF DEVICES IN GAS/VAPOR SERVICE	hdr
<p>(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).</p>	40 CFR Section 60.482-4(a) Minn. R. 7011.2900, subp. A

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

<p>(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.</p> <p>(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition 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).</p>	<p>40 CFR Section 60.482-4(b) Minn. R. 7011.2900, subp. A</p>
<p>D. STANDARDS: SAMPLING CONNECTION SYSTEMS</p>	<p>hdr</p>
<p>(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).</p>	<p>40 CFR Section 60.482-5(a) Minn. R. 7011.2900, subp. A</p>
<p>(b) Each closed-purge, closed-loop, or closed-vent system shall:</p> <p>(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.</p> <p>(c) In situ sampling systems are exempt from these requirements.</p>	<p>40 CFR Section 60.482-5(b) and (c) Minn. R. 7011.2900, subp. A</p>
<p>E. STANDARDS: OPEN ENDED VALVES OR LINES</p>	<p>hdr</p>
<p>(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).</p> <p>(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.</p>	<p>40 CFR Section 60.482-6(a) Minn. R. 7011.2900, subp. A</p>
<p>(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.</p> <p>(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.</p>	<p>40 CFR 60.482-6(b) and (c) Minn. R. 7011.2900, subp. A</p>
<p>F. STANDARDS: VALVES</p>	<p>hdr</p>
<p>(a) Each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b).</p>	<p>40 CFR Section 60.482-7(a) Minn. R. 7011.2900, subp. A</p>
<p>(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.</p> <p>(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.</p> <p>(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.</p>	<p>40 CFR Section 60.482-7(b) and (c) Minn. R. 7011.2900, subp. A</p>
<p>(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 provided in 40 CFR 60.482-9.</p> <p>(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.</p>	<p>40 CFR Section 60.482-7(d) Minn. R. 7011.2900, subp. A</p>
<p>(e) First attempts at repair include, but are not limited to, the following best practices where practicable:</p> <p>(1) Tightening of bonnet bolts; (2) Replacement of bonnet bolts; (3) Tightening of packing gland nuts; (4) Injection of lubricant into lubricated packing</p>	<p>40 CFR Section 60.482-7(e) Minn. R. 7011.2900, subp. A</p>
<p>G. STANDARDS: PUMPS AND VALVES IN HEAVY LIQUID SERVICE, PRESSURE RELIEF DEVICES IN LIGHT LIQUID OR HEAVY LIQUID SERVICE, AND FLANGES AND OTHER CONNECTORS.</p>	<p>hdr</p>
<p>(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.</p>	<p>40 CFR Section 60.482-8(a) Minn. R. 7011.2900, subp. A</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

<p>(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.</p> <p>(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 (delay of repair).</p> <p>(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.</p>	<p>40 CFR Section 60.482-8(b) and (c) Minn. R. 7011.2900, subp. A</p>
<p>(d) First attempts at repair include, but are not limited to, the best practices described under 40 CFR 60.482-7(e).</p>	<p>40 CFR Section 60.482-8(d) Minn. R. 7011.2900, subp. A</p>
<p>H. DELAY OF REPAIR</p>	<p>hdr</p>
<p>(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.</p> <p>(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.</p>	<p>40 CFR Section 60.482-9(a) and (b) Minn. R. 7011.2900, subp. A</p>
<p>(c) Delay of repair for valves will be allowed if:</p> <p>(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</p> <p>(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.</p>	<p>40 CFR Section 60.482-9(c) Minn. R. 7011.2900, subp. A</p>
<p>(d) Delay of repair for pumps will be allowed if:</p> <p>(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and</p> <p>(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.</p>	<p>40 CFR Section 60.482-9(d) Minn. R. 7011.2900, subp. A</p>
<p>(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.</p>	<p>40 CFR Section 60.482-9(e) Minn. R. 7011.2900, subp. A</p>
<p>I. TESTING PROCEDURES</p>	<p>hdr</p>
<p>Compliance shall be determined by the methods specified in 40 CFR 60.485.</p>	<p>40 CFR Section 60.485 Minn. R. 7011.2900, subp. A</p>
<p>J. RECORDKEEPING</p>	<p>hdr</p>
<p>(b) When each leak is detected, the following requirements apply:</p> <p>(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.</p> <p>(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.</p> <p>(3) The identification on equipment except on a valve, may be removed after it has been repaired.</p>	<p>40 CFR Section 60.486(b) Minn. R. 7011.2900, subp. A</p>
<p>(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:</p> <p>(1) The instrument and operator identification numbers and the equipment identification number.</p> <p>(2) The date the leak was detected and the dates of each attempt to repair the leak.</p> <p>(3) Repair methods applied in each attempt to repair the leak.</p> <p>(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.</p>	<p>40 CFR Section 60.486(c)(1) - (4) Minn. R. 7011.2900, subp. A</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

<p>(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.</p>	<p>40 CFR Section 60.486(c)(5) - (9) Minn. R. 7011.2900, subp. A</p>
<p>K. REPORTING REQUIREMENTS</p>	<p>hdr</p>
<p>(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.</p>	<p>40 CFR Section 60.487(a) Minn. R. 7011.2900, subp. A</p>
<p>(b) The initial semiannual report to the Administrator 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</p>	<p>40 CFR Section 60.487(b) Minn. R. 7011.2900, subp. A</p>
<p>(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),</p>	<p>40 CFR Section 60.487(c)(1) and (2)(i) - (2)(iv) Minn. R. 7011.2900, subp. A</p>
<p> (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.</p>	<p>40 CFR Section 60.487(c)(v) - (vii) Minn. R. 7011.2900, subp. A</p>
<p>(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 occurred since the initial report or subsequent revisions to the initial report.</p>	<p>40 CFR Section 60.487(c)(3) and (4) Minn. R. 7011.2900, subp. A</p>
<p>(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 initial performance tests at least 30 days before the initial performance tests.</p>	<p>40 CFR Section 60.487(e) Minn. R. 7011.2900, subp. A</p>

TABLE B: SUBMITTALS

B-1 05/17/11

Facility Name: Agri-Energy LLC
Permit Number: 13300023 - 009

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

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

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 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 any application for a permit or permit amendment to:

AQ Permit Document Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

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

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

AQ Compliance Tracking Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

B-2 05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

What to send	When to send	Portion of Facility Affected
Notification	due 15 days after Equipment Installation notify the Commissioner that the height of SV001 has been increased to 60 feet.	SV001

TABLE B: RECURRENT SUBMITTALS

B-3 05/17/11

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 09/04/1998 The first report covers January 1 to June 30. The second report covers July 1 to December 31.	Total Facility
Compliance Certification	due 30 days after end of each calendar year starting 09/04/1998 (for the previous calendar year). The Permittee shall submit this to the Commissioner on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX I -- Calculation of NO_x Emissions

Facility Name: Agri-Energy, LLC

Permit Number: 13300023-007

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

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

Where:

A = The quantity of natural gas combusted in the DDGS dryer and the boiler (EU 018) during the previous month, in million cubic feet

B = The quantity of propane combusted in the DDGS dryer, boiler (EU 018) and the thermal oxidizer (CE 006) during the previous month, in gallons

C = The quantity of natural gas combusted in the thermal oxidizer during the previous month, in million cubic feet

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.

EF_{NG-LOW} = The most current AP-42 emission factor for nitrogen oxide emissions from the combustion of natural gas in a low NO_x burner, 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 0.025 tons of NO_x per million cubic feet of natural gas, 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.

Appendix II – Modeling Information for Agri-Energy, Luverne, Rock County, Minnesota

Air Permit Major Modification Application, Agri-Energy, LLC prepared by Trinity Consultants (March 2011).

Modeling Summary Report for Technical Support Document

This appendix summarizes PM2.5 and PM10 NAAQS modeling.

MPCA REPORT CREATION DATE & TIME: 03/01/2011 10:09:06

* Modeling Parameters and Modeling Results Summary *
* for Air Modeling Submittal in Directory(s) Below *

Note to MPCA Permit Engineer: Please use...

Landscape

Courier, 8 pt

Margins: 0.5 left/right/bottom, 0.8 top for header.

Directory of

X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\20110301_Files\PM10_SiltLoading2GramsPerSquareMeter

Directory of

X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\20110301_Files\PM10_SiltLoading2GramsPerSquareMeter

\Annual

Directory of

X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\20110301_Files\PM25_SiltLoading2GramsPerSquareMeter

Directory of X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\Dennis_2011GVL

MPCA REPORT CREATION DATE & TIME: 03/01/2011 10:09:06

* Modeling Parameters and Modeling Results Summary *
* for Air Modeling Submittal in Directory(s) Below *

This MPCA computer-generated summary report includes:

- Directory of AERMOD Model Output Files, followed by:
- Model Setup Options Summary
- Emission Sources
- Source Groups
- Misc. Info. (e.g. ECHO, INCLUDED, meteorology, etc.)
- Modeling Results by Source Group (without background)
- (Only H1H for Annual; Any HnH for ShortTerm Averages)

See corresponding input/output files for other items:
building and terrain information, more urban details,
sample meteorological data and wind speed categories,
emission scalars, receptors, plot/post/other outputs,
and other EPA AERMOD dispersion model features/items.

Pathname Description:

Pathname has 3 parts: fixed MPCA; flexible MPCA; USER
Pathname Part1(MPCA): X:\...\Air_Modeling\Projects\
Pathname Part2(MPCA): \PermitId_CompanyName\YEARMNDY\
Pathname Part3(USER): user folder name and file name.
Filenames with spaces were replaced with underscores.

Please direct questions about this summary report to:
Dennis Becker 651-757-2217 Dennis.Becker@state.mn.us.

Directory of

X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\20110301_Files\PM10_SiltLoading2GramsPerSquareMeter
02/22/2011 02:09 PM 944,759 AEL_PM10.aml

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\Annual

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02/21/2011	06:10 PM	960,485	AEL_PM10-06.aml
02/21/2011	06:28 PM	960,485	AEL_PM10-07.aml
02/21/2011	05:15 PM	960,485	AEL_PM10-08.aml

Directory of

X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\20110301_Files\PM25_SiltLoading2GramsPerSquareMeter

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02/27/2011	03:05 PM	960,486	AEL_PM25-07.aml
02/27/2011	03:34 PM	960,486	AEL_PM25-08.aml

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02/22/2011 11:40 AM 1,180,513 GVL_FP25.OUT

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Misc. Input (ECHO, INCLUDED, meteorology, etc.)

CO TITLEONE Agri-Energy LLC - PM10 24 hour and Annual

CO TITLETWO Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM to 7PM during winter RTO at 5lb/hr

CO MODELOPT DFAULT CONC

SO EMISFACT	AELRA01	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA01	MONTH	1.00	1.00	1.00	1.00				
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SO EMISFACT	AELRA05	MONTH	1.00	1.00	1.00	1.00				
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SO EMISFACT	AELRC03	MONTH	1.00	1.00	1.00	1.00				
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SO	EMISFACT	AELRJ05	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO	EMISFACT	AELRJ05	MONTH	1.00	1.00	1.00	1.00													
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SO	EMISFACT	AELRJ06	MONTH	1.00	1.00	1.00	1.00													
SO	EMISFACT	AELSV015	SEASHR	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
SO	EMISFACT	AELSV015	SEASHR	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SO	EMISFACT	AELSV015	SEASHR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SO	EMISFACT	AELSV015	SEASHR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SO	EMISFACT	AELSV015	SEASHR	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
SO	EMISFACT	AELSV015	SEASHR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SO	SRCGROUP	ALL																		
SO	SRCGROUP	DRYER	AELSV015																	
SO	SRCGROUP	POINT	AELSV001	AELSV002	AELSV004	AELSV011	AELSV014	AELSV017												
SO	SRCGROUP	DOORS	AELFS24A	AELFS24B																
SO	SRCGROUP	COOLING	AELFS06A	AELFS06B	AELFS06C															
SO	SRCGROUP	ROADS	AELRA01	AELRA02	AELRA03	AELRA04	AELRA05	AELRA06												
SO	SRCGROUP	ROADS	AELRB01	AELRB02	AELRB03	AELRB04	AELRB05	AELRB06												
SO	SRCGROUP	ROADS	AELRB07	AELRB08	AELRB09	AELRB10	AELRB11	AELRB12												
SO	SRCGROUP	ROADS	AELRB13	AELRC01	AELRC02	AELRC03	AELRC04	AELRC05												
SO	SRCGROUP	ROADS	AELRC06	AELRC07	AELRD01	AELRD02	AELRD03	AELRD04												
SO	SRCGROUP	ROADS	AELRD05	AELRD06	AELRD07	AELRE01	AELRE02	AELRE03												
SO	SRCGROUP	ROADS	AELRE04	AELRF01	AELRF02	AELRF03	AELRF04	AELRF05												
SO	SRCGROUP	ROADS	AELRF06	AELRF07	AELRF08	AELRG01	AELRG02	AELRG03												
SO	SRCGROUP	ROADS	AELRG04	AELRG05	AELRG06	AELRH01	AELRH02	AELRH03												
SO	SRCGROUP	ROADS	AELRH04	AELRH05	AELRH06	AELRH07	AELRH08	AELRH09												
SO	SRCGROUP	ROADS	AELRH10	AELRH11	AELRH12	AELRH13	AELRI01	AELRI02												
SO	SRCGROUP	ROADS	AELRI03	AELRI04	AELRK01	AELRK02	AELRK03	AELRK04												
SO	SRCGROUP	ROADS	AELRK05	AELRK06	AELRK07	AELRK08	AELRK09	AELRK10												
SO	SRCGROUP	ROADS	AELRJ01	AELRJ02	AELRJ03	AELRJ04	AELRJ05	AELRJ06												
SO	SRCGROUP	AEL	AELRA01	AELRA02	AELRA03	AELRA04	AELRA05	AELRA06	AELRB01											
SO	SRCGROUP	AEL	AELRB02	AELRB03	AELRB04	AELRB05	AELRB06	AELRB07	AELRB08											
SO	SRCGROUP	AEL	AELRB09	AELRB10	AELRB11	AELRB12	AELRB13	AELRC01	AELRC02											
SO	SRCGROUP	AEL	AELRC03	AELRC04	AELRC05	AELRC06	AELRC07	AELRD01	AELRD02											
SO	SRCGROUP	AEL	AELRD03	AELRD04	AELRD05	AELRD06	AELRD07	AELRE01	AELRE02											
SO	SRCGROUP	AEL	AELRE03	AELRE04	AELRF01	AELRF02	AELRF03	AELRF04	AELRF05											
SO	SRCGROUP	AEL	AELRF06	AELRF07	AELRF08	AELRG01	AELRG02	AELRG03	AELRG04											
SO	SRCGROUP	AEL	AELRG05	AELRG06	AELRH01	AELRH02	AELRH03	AELRH04	AELRH05											
SO	SRCGROUP	AEL	AELRH06	AELRH07	AELRH08	AELRH09	AELRH10	AELRH11	AELRH12											
SO	SRCGROUP	AEL	AELRH13	AELRI01	AELRI02	AELRI03	AELRI04	AELRK01	AELRK02											
SO	SRCGROUP	AEL	AELRK03	AELRK04	AELRK05	AELRK06	AELRK07	AELRK08	AELRK09											
SO	SRCGROUP	AEL	AELRK10	AELRJ01	AELRJ02	AELRJ03	AELRJ04	AELRJ05	AELRJ06											
SO	SRCGROUP	AEL	AELFS24A	AELFS24B	AELSV001	AELSV002	AELSV004	AELSV011												
SO	SRCGROUP	AEL	AELSV014	AELSV017	AELFS06A	AELFS06B	AELSV015	AELFS06C												
SO	SRCGROUP	AELSV001	AELSV001																	
SO	SRCGROUP	AELSV002	AELSV002																	
SO	SRCGROUP	AELSV004	AELSV004																	
SO	SRCGROUP	AELSV011	AELSV011																	
SO	SRCGROUP	AELSV014	AELSV014																	
SO	SRCGROUP	AELSV017	AELSV017																	

ME SURFFILE "P:\Clients\Gevo\MN Luverne\102401_0018 Regulatory Applicability\Modeling\November 2010 Modeling Data\MET\MJQ_MPX_04-08\MJQMPX04-08.sfc"

** SURFFILE "P:\Clients\Gevo\MN Luverne\102401_0018 Regulatory Applicability\Modeling\November 2010 Modeling Data\MET\MJQ_MPX_04-08\MJQMPX04-08.sfc"

ME PROFFILE "P:\Clients\Gevo\MN Luverne\102401_0018 Regulatory Applicability\Modeling\November 2010 Modeling Data\MET\MJQ_MPX_04-08\MJQMPX04-08.pfl"

** PROFFILE "P:\Clients\Gevo\MN Luverne\102401_0018 Regulatory Applicability\Modeling\November 2010 Modeling Data\MET\MJQ_MPX_04-08\MJQMPX04-08.pfl"

ME SURFDATA 99999 2004
ME UAIRDATA 94983 2004
ME PROFBASE 404.2
OU RECTABLE 24 SIXTH

*** AERMOD - VERSION 09292 ***

*** Agri-Energy LLC - PM10 24 hour and Annual

02/22/11

*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM

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**MODELOPTs: RegDEFAULT CONC

ELEV

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BLDG EXISTS	URBAN SOURCE	CAP/HOR	EMIS RATE SCALAR VARY BY
AELSV001	0	0.47000E-01	239811.1	4837756.5	446.2	18.29	0.00	32.00	0.41	YES	NO	NO	
AELSV002	0	0.28000E-01	239912.5	4837742.0	446.3	3.66	0.00	37.51	0.30	YES	NO	NO	
AELSV004	0	0.63000E+00	239895.1	4837782.5	446.7	53.34	449.82	11.87	1.40	YES	NO	NO	
AELSV011	0	0.57000E-01	239919.9	4837796.0	446.9	12.19	444.26	16.56	0.76	YES	NO	NO	
AELSV014	0	0.10100E+00	239848.0	4837773.5	446.3	19.81	307.59	25.87	0.46	YES	NO	NO	
AELSV017	0	0.57000E-01	239919.9	4837806.0	447.0	12.19	444.26	4.93	1.40	YES	NO	NO	
AELFS06A	0	0.14300E-01	239907.8	4837859.5	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	
AELFS06B	0	0.14300E-01	239907.8	4837854.0	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	
AELSV015	0	0.23280E+00	239795.5	4837764.5	446.4	3.51	394.00	0.10	2.66	YES	NO	NO	SEASHR
AELFS06C	0	0.14300E-01	239907.8	4837864.6	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	

**MODELOPTs: RegDFAULT CONC

ELEV

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	*** VOLUME SOURCE DATA ***			INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
					BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)				
AELRA01	0	0.13600E-02	240049.2	4837698.0	446.8	2.55	4.65	2.37	NO	MONTH	
AELRA02	0	0.13600E-02	240039.2	4837699.0	446.7	2.55	4.65	2.37	NO	MONTH	
AELRA03	0	0.13600E-02	240029.3	4837700.0	446.6	2.55	4.65	2.37	NO	MONTH	
AELRA04	0	0.13600E-02	240019.3	4837701.0	446.5	2.55	4.65	2.37	NO	MONTH	
AELRA05	0	0.13600E-02	240009.4	4837702.0	446.4	2.55	4.65	2.37	NO	MONTH	
AELRA06	0	0.13600E-02	239999.4	4837703.0	446.3	2.55	4.65	2.37	NO	MONTH	
AELRB01	0	0.20800E-02	239994.4	4837705.0	446.3	2.65	4.65	2.47	NO	MONTH	
AELRB02	0	0.20800E-02	239995.0	4837715.0	446.4	2.65	4.65	2.47	NO	MONTH	
AELRB03	0	0.20800E-02	239995.6	4837725.0	446.5	2.65	4.65	2.47	NO	MONTH	
AELRB04	0	0.20800E-02	239996.2	4837735.0	446.6	2.65	4.65	2.47	NO	MONTH	
AELRB05	0	0.20800E-02	239996.8	4837744.9	446.7	2.65	4.65	2.47	NO	MONTH	
AELRB06	0	0.20800E-02	239997.4	4837754.9	446.8	2.65	4.65	2.47	NO	MONTH	
AELRB07	0	0.20800E-02	239998.0	4837764.9	447.0	2.65	4.65	2.47	NO	MONTH	
AELRB08	0	0.20800E-02	239998.6	4837774.9	447.2	2.65	4.65	2.47	NO	MONTH	
AELRB09	0	0.20800E-02	239999.2	4837784.9	447.4	2.65	4.65	2.47	NO	MONTH	
AELRB10	0	0.20800E-02	239999.8	4837794.8	447.5	2.65	4.65	2.47	NO	MONTH	
AELRB11	0	0.20800E-02	240000.4	4837804.8	447.6	2.65	4.65	2.47	NO	MONTH	
AELRB12	0	0.20800E-02	240001.0	4837814.8	447.7	2.65	4.65	2.47	NO	MONTH	
AELRB13	0	0.20800E-02	240001.6	4837824.8	447.8	2.65	4.65	2.47	NO	MONTH	
AELRC01	0	0.12500E-02	239999.8	4837829.0	447.9	2.65	4.65	2.47	NO	MONTH	
AELRC02	0	0.12500E-02	239989.8	4837829.8	447.9	2.65	4.65	2.47	NO	MONTH	
AELRC03	0	0.12500E-02	239979.8	4837830.7	447.9	2.65	4.65	2.47	NO	MONTH	
AELRC04	0	0.12500E-02	239969.9	4837831.5	447.8	2.65	4.65	2.47	NO	MONTH	
AELRC05	0	0.12500E-02	239959.9	4837832.3	447.7	2.65	4.65	2.47	NO	MONTH	
AELRC06	0	0.12500E-02	239949.9	4837833.1	447.6	2.65	4.65	2.47	NO	MONTH	
AELRC07	0	0.12500E-02	239940.0	4837834.0	447.5	2.65	4.65	2.47	NO	MONTH	
AELRD01	0	0.13600E-02	239938.6	4837834.0	447.5	2.65	4.65	2.47	NO	MONTH	
AELRD02	0	0.13600E-02	239928.6	4837834.7	447.4	2.65	4.65	2.47	NO	MONTH	
AELRD03	0	0.13600E-02	239918.6	4837835.3	447.3	2.65	4.65	2.47	NO	MONTH	
AELRD04	0	0.13600E-02	239908.6	4837836.0	447.2	2.65	4.65	2.47	NO	MONTH	
AELRD05	0	0.13600E-02	239898.7	4837836.6	447.1	2.65	4.65	2.47	NO	MONTH	
AELRD06	0	0.13600E-02	239888.7	4837837.3	446.9	2.65	4.65	2.47	NO	MONTH	
AELRD07	0	0.13600E-02	239878.7	4837838.0	446.9	2.65	4.65	2.47	NO	MONTH	
AELRE01	0	0.11300E-02	239869.5	4837838.5	446.9	2.72	4.65	2.53	NO	MONTH	
AELRE02	0	0.11300E-02	239859.5	4837838.7	446.9	2.72	4.65	2.53	NO	MONTH	
AELRE03	0	0.11300E-02	239849.5	4837838.8	446.9	2.72	4.65	2.53	NO	MONTH	
AELRE04	0	0.11300E-02	239840.0	4837839.0	446.9	2.72	4.65	2.53	NO	MONTH	
AELRF01	0	0.11300E-02	239840.0	4837838.5	446.9	2.72	4.65	2.53	NO	MONTH	
AELRF02	0	0.11300E-02	239836.8	4837829.0	446.8	2.72	4.65	2.53	NO	MONTH	
AELRF03	0	0.11300E-02	239833.6	4837819.6	446.8	2.72	4.65	2.53	NO	MONTH	

**MODELOPTs: RegDFAULT CONC

ELEV

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	*** VOLUME SOURCE DATA ***		BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR	EMISSION RATE VARY BY
			X (METERS)	Y (METERS)							
AELRF04	0	0.11300E-02	239832.9	4837809.6	446.8	2.72	4.65	2.53	NO	MONTH	
AELRF05	0	0.11300E-02	239832.3	4837799.6	446.8	2.72	4.65	2.53	NO	MONTH	
AELRF06	0	0.11300E-02	239831.7	4837789.6	446.6	2.72	4.65	2.53	NO	MONTH	
AELRF07	0	0.11300E-02	239831.0	4837779.6	446.4	2.72	4.65	2.53	NO	MONTH	
AELRF08	0	0.11300E-02	239830.5	4837771.0	446.2	2.72	4.65	2.53	NO	MONTH	
AELRG01	0	0.59900E-03	239828.5	4837741.0	445.9	2.72	4.65	2.53	NO	MONTH	
AELRG02	0	0.59900E-03	239828.4	4837731.0	445.8	2.72	4.65	2.53	NO	MONTH	
AELRG03	0	0.59900E-03	239828.2	4837721.0	445.7	2.72	4.65	2.53	NO	MONTH	
AELRG04	0	0.59900E-03	239837.2	4837719.4	445.7	2.72	4.65	2.53	NO	MONTH	
AELRG05	0	0.59900E-03	239847.2	4837718.7	445.7	2.72	4.65	2.53	NO	MONTH	
AELRG06	0	0.59900E-03	239857.2	4837718.0	445.8	2.72	4.65	2.53	NO	MONTH	
AELRH01	0	0.23000E-03	239870.1	4837835.5	446.9	2.42	4.65	2.25	NO	MONTH	
AELRH02	0	0.23000E-03	239869.1	4837825.5	446.8	2.42	4.65	2.25	NO	MONTH	
AELRH03	0	0.23000E-03	239868.1	4837815.6	446.8	2.42	4.65	2.25	NO	MONTH	
AELRH04	0	0.23000E-03	239867.2	4837805.6	446.7	2.42	4.65	2.25	NO	MONTH	
AELRH05	0	0.23000E-03	239866.2	4837795.7	446.6	2.42	4.65	2.25	NO	MONTH	
AELRH06	0	0.23000E-03	239865.3	4837785.7	446.5	2.42	4.65	2.25	NO	MONTH	
AELRH07	0	0.23000E-03	239864.3	4837775.8	446.4	2.42	4.65	2.25	NO	MONTH	
AELRH08	0	0.23000E-03	239863.3	4837765.8	446.3	2.42	4.65	2.25	NO	MONTH	
AELRH09	0	0.23000E-03	239862.4	4837755.9	446.2	2.42	4.65	2.25	NO	MONTH	
AELRH10	0	0.23000E-03	239861.4	4837745.9	446.1	2.42	4.65	2.25	NO	MONTH	
AELRH11	0	0.23000E-03	239860.4	4837736.0	446.0	2.42	4.65	2.25	NO	MONTH	
AELRH12	0	0.23000E-03	239859.5	4837726.0	445.9	2.42	4.65	2.25	NO	MONTH	
AELRH13	0	0.23000E-03	239858.8	4837719.5	445.8	2.42	4.65	2.25	NO	MONTH	
AELRI01	0	0.82900E-03	239859.4	4837717.0	445.8	2.65	4.65	2.47	NO	MONTH	
AELRI02	0	0.82900E-03	239869.3	4837715.7	445.9	2.65	4.65	2.47	NO	MONTH	
AELRI03	0	0.82900E-03	239879.2	4837714.4	446.0	2.65	4.65	2.47	NO	MONTH	
AELRI04	0	0.82900E-03	239889.2	4837713.2	446.0	2.65	4.65	2.47	NO	MONTH	
AELRK01	0	0.90500E-03	239899.1	4837711.9	446.0	2.55	4.65	2.37	NO	MONTH	
AELRK02	0	0.90500E-03	239909.0	4837710.6	446.0	2.55	4.65	2.37	NO	MONTH	
AELRK03	0	0.90500E-03	239918.9	4837709.3	446.0	2.55	4.65	2.37	NO	MONTH	
AELRK04	0	0.90500E-03	239928.8	4837708.0	446.0	2.55	4.65	2.37	NO	MONTH	
AELRK05	0	0.90500E-03	239938.8	4837707.0	446.0	2.55	4.65	2.37	NO	MONTH	
AELRK06	0	0.90500E-03	239948.8	4837706.3	446.1	2.55	4.65	2.37	NO	MONTH	
AELRK07	0	0.90500E-03	239958.7	4837705.5	446.2	2.55	4.65	2.37	NO	MONTH	
AELRK08	0	0.90500E-03	239968.7	4837704.8	446.3	2.55	4.65	2.37	NO	MONTH	
AELRK09	0	0.90500E-03	239978.7	4837704.0	446.3	2.55	4.65	2.37	NO	MONTH	
AELRK10	0	0.90500E-03	239988.6	4837703.2	446.3	2.55	4.65	2.37	NO	MONTH	
AELRJ01	0	0.82900E-03	240003.2	4837829.0	447.9	2.65	4.65	2.47	NO	MONTH	
AELRJ02	0	0.82900E-03	240013.1	4837828.2	447.9	2.65	4.65	2.47	NO	MONTH	

*** AERMOD - VERSION 09292 ***

*** Agri-Energy LLC - PM10 24 hour and Annual

02/22/11

*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM

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**MODELOPTs: RegDFAULT CONC

ELEV

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X		Y		BASE ELEV.	RELEASE HEIGHT	INIT. SY	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
			(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)				
AELRJ03	0	0.82900E-03	240023.1	4837827.5	447.9	2.65	4.65	2.47	NO	MONTH		
AELRJ04	0	0.82900E-03	240033.1	4837826.7	447.9	2.65	4.65	2.47	NO	MONTH		
AELRJ05	0	0.82900E-03	240043.0	4837825.9	447.6	2.65	4.65	2.47	NO	MONTH		
AELRJ06	0	0.82900E-03	240053.0	4837825.1	447.0	2.65	4.65	2.47	NO	MONTH		
AELFS24A	0	0.40100E-01	239830.5	4837770.0	446.2	3.05	2.13	2.84	NO			
AELFS24B	0	0.40100E-01	239828.2	4837742.5	445.9	3.05	2.13	2.84	NO			
01100026	0	0.54300E+01	237797.6	4840863.5	472.0	10.00	20.00	10.00	NO			
10500051	0	0.54100E+01	257491.3	4858037.0	518.0	10.00	20.00	10.00	NO			
10500054	0	0.51400E-02	289353.0	4834470.0	479.0	10.00	20.00	10.00	NO			
11700015	0	0.26800E+01	233556.5	4875363.5	528.0	10.00	20.00	10.00	NO			
11700018	0	0.14200E+00	236063.2	4875374.0	534.4	10.00	20.00	10.00	NO			
11700023	0	0.54700E+00	244616.3	4886952.0	535.0	10.00	20.00	10.00	NO			
13300017	0	0.51700E+01	227518.1	4826756.5	453.0	10.00	20.00	10.00	NO			
13300018	0	0.54900E-01	240995.4	4839838.0	458.8	10.00	20.00	10.00	NO			
13300020	0	0.19400E-01	227518.1	4826756.5	453.0	10.00	20.00	10.00	NO			
SD000004	0	0.13200E+00	194373.0	4842723.0	484.2	20.00	20.00	10.00	NO			
SD000005	0	0.17600E-01	196043.0	4842135.0	475.7	10.00	20.00	10.00	NO			

**MODELOPTs: RegDFAULT CONC

ELEV

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs																																																																																																																																																																																																								
ALL	AELRA01	AELRA02	AELRA03	AELRA04	AELRA05	AELRA06	AELRB01	AELRB02	AELRB03	AELRB04	AELRB05	AELRB06	AELRB07	AELRB08	AELRB09	AELRB10	AELRB11	AELRB12	AELRB13	AELRC01	AELRC02	AELRC03	AELRC04	AELRC05	AELRC06	AELRC07	AELRD01	AELRD02	AELRD03	AELRD04	AELRD05	AELRD06	AELRD07	AELRE01	AELRE02	AELRE03	AELRF01	AELRF02	AELRF03	AELRF04	AELRF05	AELRF06	AELRF07	AELRF08	AELRG01	AELRG02	AELRG03	AELRG04	AELRG05	AELRG06	AELRH01	AELRH02	AELRH03	AELRH04	AELRH05	AELRH06	AELRH07	AELRH08	AELRH09	AELRH10	AELRH11	AELRH12	AELRH13	AELRI01	AELRI02	AELRI03	AELRI04	AELRK01	AELRK02	AELRK03	AELRK04	AELRK05	AELRK06	AELRK07	AELRK08	AELRK09	AELRK10	AELRJ01	AELRJ02	AELRJ03	AELRJ04	AELRJ05	AELRJ06	AELFS24A	AELFS24B	01100026	10500051	10500054	11700015	11700018	11700023	13300017	13300018	13300020	SD000004	SD000005	AELSV001	AELSV002	AELSV004	AELSV011	AELSV014	AELSV017	AELFS06A	AELFS06B	AELSV015	AELFS06C	AELSV015	AELSV001	AELSV002	AELSV004	AELSV011	AELSV014	AELSV017	AELFS24A	AELFS24B	AELFS06A	AELFS06B	AELFS06C	AELRA01	AELRA02	AELRA03	AELRA04	AELRA05	AELRA06	AELRB01	AELRB02	AELRB03	AELRB04	AELRB05	AELRB06	AELRB07	AELRB08	AELRB09	AELRB10	AELRB11	AELRB12	AELRB13	AELRC01	AELRC02	AELRC03	AELRC04	AELRC05	AELRC06	AELRC07	AELRD01	AELRD02	AELRD03	AELRD04	AELRD05	AELRD06	AELRD07	AELRE01	AELRE02	AELRE03	AELRF01	AELRF02	AELRF03	AELRF04	AELRF05	AELRF06	AELRF07	AELRF08	AELRG01	AELRG02	AELRG03	AELRG04	AELRG05	AELRG06	AELRH01	AELRH02	AELRH03	AELRH04	AELRH05	AELRH06	AELRH07	AELRH08	AELRH09	AELRH10	AELRH11	AELRH12	AELRH13	AELRI01	AELRI02	AELRI03	AELRI04	AELRK01	AELRK02	AELRK03	AELRK04	AELRK05	AELRK06	AELRK07	AELRK08	AELRK09	AELRK10	AELRJ01	AELRJ02	AELRJ03	AELRJ04	AELRJ05	AELRJ06

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*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM

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**MODELOPTs: RegDEFAULT CONC

ELEV

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID

SOURCE IDs

AEL AELRA01 , AELRA02 , AELRA03 , AELRA04 , AELRA05 , AELRA06 , AELRB01 , AELRB02 , AELRB03 , AELRB04 , AELRB05 , AELRB06 ,
AELRB07 , AELRB08 , AELRB09 , AELRB10 , AELRB11 , AELRB12 , AELRB13 , AELRC01 , AELRC02 , AELRC03 , AELRC04 , AELRC05 ,
AELRC06 , AELRC07 , AELRD01 , AELRD02 , AELRD03 , AELRD04 , AELRD05 , AELRD06 , AELRD07 , AELRE01 , AELRE02 , AELRE03 ,
AELRE04 , AELRF01 , AELRF02 , AELRF03 , AELRF04 , AELRF05 , AELRF06 , AELRF07 , AELRF08 , AELRG01 , AELRG02 , AELRG03 ,
AELRG04 , AELRG05 , AELRG06 , AELRH01 , AELRH02 , AELRH03 , AELRH04 , AELRH05 , AELRH06 , AELRH07 , AELRH08 , AELRH09 ,
AELRH10 , AELRH11 , AELRH12 , AELRH13 , AELRI01 , AELRI02 , AELRI03 , AELRI04 , AELRK01 , AELRK02 , AELRK03 , AELRK04 ,
AELRK05 , AELRK06 , AELRK07 , AELRK08 , AELRK09 , AELRK10 , AELRJ01 , AELRJ02 , AELRJ03 , AELRJ04 , AELRJ05 , AELRJ06 ,
AELFS24A, AELFS24B, AELSV001, AELSV002, AELSV004, AELSV011, AELSV014, AELSV017, AELFS06A, AELFS06B, AELSV015, AELFS06C,
AELSV001 AELSV001,
AELSV002 AELSV002,
AELSV004 AELSV004,
AELSV011 AELSV011,
AELSV014 AELSV014,
AELSV017 AELSV017,

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*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

THIS & MOST OTHER ITEMS NOT PRINTED TO SAVE SPACE

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *
LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE	-- RECEPTOR LOCATION --		DISTANCE
ID	XR (METERS)	YR (METERS)	(METERS)
--- AELRA01	240051.3	4837692.1	-3.73
AELRA01	240051.8	4837701.9	-5.30
AELRJ06	240057.7	4837819.9	-2.98
AELRJ06	240058.2	4837829.8	-3.01

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*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: P:\Clients\Gevo\MN Luverne\102401_0018 Regulatory Applicability\Modeling\Novem Met Version: 06341

Profile file: P:\Clients\Gevo\MN Luverne\102401_0018 Regulatory Applicability\Modeling\Novem

Surface format: FREE

Profile format: FREE

Surface station no.: 99999

Upper air station no.: 94983

Name: UNKNOWN

Name: UNKNOWN

Year: 2004

Year: 2004

First 24 hours of scalar data

YR	MO	DY	JDY	HR	HO	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT
04	01	01	1	01	-39.9	0.335	-9.000	-9.000	-999.	447.	85.4	0.02	0.49	1.00	5.70	161.	10.0	268.1	2.0			
04	01	01	1	02	-32.2	0.270	-9.000	-9.000	-999.	325.	55.5	0.01	0.49	1.00	5.10	138.	10.0	268.1	2.0			
04	01	01	1	03	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	144.	10.0	268.1	2.0			
04	01	01	1	04	-27.9	0.235	-9.000	-9.000	-999.	267.	41.8	0.01	0.49	1.00	4.60	143.	10.0	268.1	2.0			
04	01	01	1	05	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	143.	10.0	268.1	2.0			
04	01	01	1	06	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	142.	10.0	268.1	2.0			
04	01	01	1	07	-48.2	0.405	-9.000	-9.000	-999.	593.	124.6	0.02	0.49	1.00	6.70	155.	10.0	268.1	2.0			
04	01	01	1	08	-27.9	0.235	-9.000	-9.000	-999.	281.	41.8	0.01	0.49	1.00	4.60	143.	10.0	268.1	2.0			
04	01	01	1	09	-26.6	0.238	-9.000	-9.000	-999.	267.	45.7	0.01	0.49	0.83	4.60	147.	10.0	268.1	2.0			
04	01	01	1	10	-21.8	0.351	-9.000	-9.000	-999.	479.	179.2	0.02	0.49	0.69	5.70	161.	10.0	271.1	2.0			
04	01	01	1	11	1.1	0.326	0.041	0.009	2.	429.	-2960.5	0.02	0.49	0.64	5.10	184.	10.0	273.1	2.0			
04	01	01	1	12	8.6	0.368	0.173	0.008	22.	513.	-524.9	0.02	0.49	0.62	5.70	196.	10.0	274.1	2.0			
04	01	01	1	13	10.7	0.400	0.239	0.007	46.	582.	-540.5	0.02	0.49	0.62	6.20	203.	10.0	274.1	2.0			
04	01	01	1	14	7.4	0.367	0.235	0.008	63.	513.	-602.8	0.02	0.49	0.63	5.70	209.	10.0	275.1	2.0			
04	01	01	1	15	-2.1	0.309	-9.000	-9.000	-999.	396.	1248.1	0.01	0.49	0.65	5.10	222.	10.0	276.1	2.0			
04	01	01	1	16	-16.3	0.222	-9.000	-9.000	-999.	243.	60.2	0.01	0.49	0.71	4.10	214.	10.0	276.1	2.0			
04	01	01	1	17	-7.3	0.079	-9.000	-9.000	-999.	69.	6.1	0.01	0.49	0.88	2.60	231.	10.0	274.1	2.0			
04	01	01	1	18	-10.5	0.094	-9.000	-9.000	-999.	67.	7.2	0.01	0.49	1.00	3.10	217.	10.0	273.1	2.0			
04	01	01	1	19	-6.8	0.075	-9.000	-9.000	-999.	48.	5.6	0.01	0.49	1.00	2.60	254.	10.0	273.1	2.0			
04	01	01	1	20	-21.9	0.188	-9.000	-9.000	-999.	187.	27.2	0.01	0.49	1.00	4.10	267.	10.0	273.1	2.0			
04	01	01	1	21	-26.7	0.229	-9.000	-9.000	-999.	251.	40.4	0.01	0.49	1.00	4.60	290.	10.0	273.1	2.0			
04	01	01	1	22	-2.3	0.044	-9.000	-9.000	-999.	86.	3.3	0.01	0.49	1.00	1.50	282.	10.0	272.1	2.0			
04	01	01	1	23	-25.0	0.213	-9.000	-9.000	-999.	226.	34.8	0.02	0.49	1.00	4.10	200.	10.0	271.1	2.0			
04	01	01	1	24	-11.3	0.099	-9.000	-9.000	-999.	78.	7.7	0.02	0.49	1.00	3.10	200.	10.0	271.1	2.0			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
04	01	01	01	10.0	1	161.	5.70	268.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\20110301_Files\PM10_SiltLoading2GramsPerSquareMeter\Annual\AEL_PM10-04.aml

Misc. Input (ECHO, INCLUDED, meteorology, etc.)

CO TITLEONE Agri-Energy LLC - PM10 24 hour and Annual

CO TITLETWO Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM to 7PM during winter RTO at 5lb/hr

CO MODELOPT DFAULT CONC

SO EMISFACT	AELRA01	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA01	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRA02	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA02	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRA03	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA03	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRA04	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA04	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRA05	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA05	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRA06	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA06	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB01	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB01	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB02	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB02	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB03	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB03	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB04	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB04	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB05	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB05	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB06	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB06	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB07	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB07	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB08	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB08	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB09	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB09	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB10	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB10	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB11	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB11	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB12	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB12	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRB13	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB13	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRC01	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC01	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRC02	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC02	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRC03	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC03	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRC04	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC04	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRC05	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC05	MONTH	1.00	1.00	1.00	1.00				
SO EMISFACT	AELRC06	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC06	MONTH	1.00	1.00	1.00	1.00				

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**MODELOPTs: RegDFault CONC

ELEV

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BLDG EXISTS	URBAN SOURCE	CAP/HOR	EMIS RATE SCALAR VARY BY
AELSV001	0	0.47000E-01	239811.1	4837756.5	446.2	18.29	0.00	32.00	0.41	YES	NO	NO	
AELSV002	0	0.28000E-01	239912.5	4837742.0	446.3	3.66	0.00	37.51	0.30	YES	NO	NO	
AELSV004	0	0.63000E+00	239895.1	4837782.5	446.7	53.34	449.82	11.87	1.40	YES	NO	NO	
AELSV011	0	0.57000E-01	239919.9	4837796.0	446.9	12.19	444.26	16.56	0.76	YES	NO	NO	
AELSV014	0	0.10100E+00	239848.0	4837773.5	446.3	19.81	307.59	25.87	0.46	YES	NO	NO	
AELSV017	0	0.57000E-01	239919.9	4837806.0	447.0	12.19	444.26	4.93	1.40	YES	NO	NO	
AELFS06A	0	0.14300E-01	239907.8	4837859.5	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	
AELFS06B	0	0.14300E-01	239907.8	4837854.0	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	
AELSV015	0	0.23280E+00	239795.5	4837764.5	446.4	3.51	394.00	0.10	2.66	YES	NO	NO	SEASHR
AELFS06C	0	0.14300E-01	239907.8	4837864.6	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	

**MODELOPTs: RegDFAULT CONC

ELEV

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	*** VOLUME SOURCE DATA ***			INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
					BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)			
AELRA01	0	0.13600E-02	240049.2	4837698.0	446.8	2.55	4.65	2.37	NO	MONTH
AELRA02	0	0.13600E-02	240039.2	4837699.0	446.7	2.55	4.65	2.37	NO	MONTH
AELRA03	0	0.13600E-02	240029.3	4837700.0	446.6	2.55	4.65	2.37	NO	MONTH
AELRA04	0	0.13600E-02	240019.3	4837701.0	446.5	2.55	4.65	2.37	NO	MONTH
AELRA05	0	0.13600E-02	240009.4	4837702.0	446.4	2.55	4.65	2.37	NO	MONTH
AELRA06	0	0.13600E-02	239999.4	4837703.0	446.3	2.55	4.65	2.37	NO	MONTH
AELRB01	0	0.20800E-02	239994.4	4837705.0	446.3	2.65	4.65	2.47	NO	MONTH
AELRB02	0	0.20800E-02	239995.0	4837715.0	446.4	2.65	4.65	2.47	NO	MONTH
AELRB03	0	0.20800E-02	239995.6	4837725.0	446.5	2.65	4.65	2.47	NO	MONTH
AELRB04	0	0.20800E-02	239996.2	4837735.0	446.6	2.65	4.65	2.47	NO	MONTH
AELRB05	0	0.20800E-02	239996.8	4837744.9	446.7	2.65	4.65	2.47	NO	MONTH
AELRB06	0	0.20800E-02	239997.4	4837754.9	446.8	2.65	4.65	2.47	NO	MONTH
AELRB07	0	0.20800E-02	239998.0	4837764.9	447.0	2.65	4.65	2.47	NO	MONTH
AELRB08	0	0.20800E-02	239998.6	4837774.9	447.2	2.65	4.65	2.47	NO	MONTH
AELRB09	0	0.20800E-02	239999.2	4837784.9	447.4	2.65	4.65	2.47	NO	MONTH
AELRB10	0	0.20800E-02	239999.8	4837794.8	447.5	2.65	4.65	2.47	NO	MONTH
AELRB11	0	0.20800E-02	240000.4	4837804.8	447.6	2.65	4.65	2.47	NO	MONTH
AELRB12	0	0.20800E-02	240001.0	4837814.8	447.7	2.65	4.65	2.47	NO	MONTH
AELRB13	0	0.20800E-02	240001.6	4837824.8	447.8	2.65	4.65	2.47	NO	MONTH
AELRC01	0	0.12500E-02	239999.8	4837829.0	447.9	2.65	4.65	2.47	NO	MONTH
AELRC02	0	0.12500E-02	239989.8	4837829.8	447.9	2.65	4.65	2.47	NO	MONTH
AELRC03	0	0.12500E-02	239979.8	4837830.7	447.9	2.65	4.65	2.47	NO	MONTH
AELRC04	0	0.12500E-02	239969.9	4837831.5	447.8	2.65	4.65	2.47	NO	MONTH
AELRC05	0	0.12500E-02	239959.9	4837832.3	447.7	2.65	4.65	2.47	NO	MONTH
AELRC06	0	0.12500E-02	239949.9	4837833.1	447.6	2.65	4.65	2.47	NO	MONTH
AELRC07	0	0.12500E-02	239940.0	4837834.0	447.5	2.65	4.65	2.47	NO	MONTH
AELRD01	0	0.13600E-02	239938.6	4837834.0	447.5	2.65	4.65	2.47	NO	MONTH
AELRD02	0	0.13600E-02	239928.6	4837834.7	447.4	2.65	4.65	2.47	NO	MONTH
AELRD03	0	0.13600E-02	239918.6	4837835.3	447.3	2.65	4.65	2.47	NO	MONTH
AELRD04	0	0.13600E-02	239908.6	4837836.0	447.2	2.65	4.65	2.47	NO	MONTH
AELRD05	0	0.13600E-02	239898.7	4837836.6	447.1	2.65	4.65	2.47	NO	MONTH
AELRD06	0	0.13600E-02	239888.7	4837837.3	446.9	2.65	4.65	2.47	NO	MONTH
AELRD07	0	0.13600E-02	239878.7	4837838.0	446.9	2.65	4.65	2.47	NO	MONTH
AELRE01	0	0.11300E-02	239869.5	4837838.5	446.9	2.72	4.65	2.53	NO	MONTH
AELRE02	0	0.11300E-02	239859.5	4837838.7	446.9	2.72	4.65	2.53	NO	MONTH
AELRE03	0	0.11300E-02	239849.5	4837838.8	446.9	2.72	4.65	2.53	NO	MONTH
AELRE04	0	0.11300E-02	239840.0	4837839.0	446.9	2.72	4.65	2.53	NO	MONTH
AELRF01	0	0.11300E-02	239840.0	4837838.5	446.9	2.72	4.65	2.53	NO	MONTH
AELRF02	0	0.11300E-02	239836.8	4837829.0	446.8	2.72	4.65	2.53	NO	MONTH
AELRF03	0	0.11300E-02	239833.6	4837819.6	446.8	2.72	4.65	2.53	NO	MONTH

**MODELOPTs: RegDFAULT CONC

ELEV

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	*** VOLUME SOURCE DATA ***		BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR	EMISSION RATE VARY BY
			X (METERS)	Y (METERS)							
AELRF04	0	0.11300E-02	239832.9	4837809.6	446.8	2.72	4.65	2.53	NO	MONTH	
AELRF05	0	0.11300E-02	239832.3	4837799.6	446.8	2.72	4.65	2.53	NO	MONTH	
AELRF06	0	0.11300E-02	239831.7	4837789.6	446.6	2.72	4.65	2.53	NO	MONTH	
AELRF07	0	0.11300E-02	239831.0	4837779.6	446.4	2.72	4.65	2.53	NO	MONTH	
AELRF08	0	0.11300E-02	239830.5	4837771.0	446.2	2.72	4.65	2.53	NO	MONTH	
AELRG01	0	0.59900E-03	239828.5	4837741.0	445.9	2.72	4.65	2.53	NO	MONTH	
AELRG02	0	0.59900E-03	239828.4	4837731.0	445.8	2.72	4.65	2.53	NO	MONTH	
AELRG03	0	0.59900E-03	239828.2	4837721.0	445.7	2.72	4.65	2.53	NO	MONTH	
AELRG04	0	0.59900E-03	239837.2	4837719.4	445.7	2.72	4.65	2.53	NO	MONTH	
AELRG05	0	0.59900E-03	239847.2	4837718.7	445.7	2.72	4.65	2.53	NO	MONTH	
AELRG06	0	0.59900E-03	239857.2	4837718.0	445.8	2.72	4.65	2.53	NO	MONTH	
AELRH01	0	0.23000E-03	239870.1	4837835.5	446.9	2.42	4.65	2.25	NO	MONTH	
AELRH02	0	0.23000E-03	239869.1	4837825.5	446.8	2.42	4.65	2.25	NO	MONTH	
AELRH03	0	0.23000E-03	239868.1	4837815.6	446.8	2.42	4.65	2.25	NO	MONTH	
AELRH04	0	0.23000E-03	239867.2	4837805.6	446.7	2.42	4.65	2.25	NO	MONTH	
AELRH05	0	0.23000E-03	239866.2	4837795.7	446.6	2.42	4.65	2.25	NO	MONTH	
AELRH06	0	0.23000E-03	239865.3	4837785.7	446.5	2.42	4.65	2.25	NO	MONTH	
AELRH07	0	0.23000E-03	239864.3	4837775.8	446.4	2.42	4.65	2.25	NO	MONTH	
AELRH08	0	0.23000E-03	239863.3	4837765.8	446.3	2.42	4.65	2.25	NO	MONTH	
AELRH09	0	0.23000E-03	239862.4	4837755.9	446.2	2.42	4.65	2.25	NO	MONTH	
AELRH10	0	0.23000E-03	239861.4	4837745.9	446.1	2.42	4.65	2.25	NO	MONTH	
AELRH11	0	0.23000E-03	239860.4	4837736.0	446.0	2.42	4.65	2.25	NO	MONTH	
AELRH12	0	0.23000E-03	239859.5	4837726.0	445.9	2.42	4.65	2.25	NO	MONTH	
AELRH13	0	0.23000E-03	239858.8	4837719.5	445.8	2.42	4.65	2.25	NO	MONTH	
AELRI01	0	0.82900E-03	239859.4	4837717.0	445.8	2.65	4.65	2.47	NO	MONTH	
AELRI02	0	0.82900E-03	239869.3	4837715.7	445.9	2.65	4.65	2.47	NO	MONTH	
AELRI03	0	0.82900E-03	239879.2	4837714.4	446.0	2.65	4.65	2.47	NO	MONTH	
AELRI04	0	0.82900E-03	239889.2	4837713.2	446.0	2.65	4.65	2.47	NO	MONTH	
AELRK01	0	0.90500E-03	239899.1	4837711.9	446.0	2.55	4.65	2.37	NO	MONTH	
AELRK02	0	0.90500E-03	239909.0	4837710.6	446.0	2.55	4.65	2.37	NO	MONTH	
AELRK03	0	0.90500E-03	239918.9	4837709.3	446.0	2.55	4.65	2.37	NO	MONTH	
AELRK04	0	0.90500E-03	239928.8	4837708.0	446.0	2.55	4.65	2.37	NO	MONTH	
AELRK05	0	0.90500E-03	239938.8	4837707.0	446.0	2.55	4.65	2.37	NO	MONTH	
AELRK06	0	0.90500E-03	239948.8	4837706.3	446.1	2.55	4.65	2.37	NO	MONTH	
AELRK07	0	0.90500E-03	239958.7	4837705.5	446.2	2.55	4.65	2.37	NO	MONTH	
AELRK08	0	0.90500E-03	239968.7	4837704.8	446.3	2.55	4.65	2.37	NO	MONTH	
AELRK09	0	0.90500E-03	239978.7	4837704.0	446.3	2.55	4.65	2.37	NO	MONTH	
AELRK10	0	0.90500E-03	239988.6	4837703.2	446.3	2.55	4.65	2.37	NO	MONTH	
AELRJ01	0	0.82900E-03	240003.2	4837829.0	447.9	2.65	4.65	2.47	NO	MONTH	
AELRJ02	0	0.82900E-03	240013.1	4837828.2	447.9	2.65	4.65	2.47	NO	MONTH	

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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X		Y		BASE RELEASE		INIT.	INIT.	URBAN SOURCE	EMISSION RATE	
			(METERS)	(METERS)	(METERS)	(METERS)	ELEV. (METERS)	HEIGHT (METERS)	SY (METERS)	SZ (METERS)		SCALAR	VARY BY
AELRJ03	0	0.82900E-03	240023.1	4837827.5	447.9	2.65	4.65	2.47	NO	MONTH			
AELRJ04	0	0.82900E-03	240033.1	4837826.7	447.9	2.65	4.65	2.47	NO	MONTH			
AELRJ05	0	0.82900E-03	240043.0	4837825.9	447.6	2.65	4.65	2.47	NO	MONTH			
AELRJ06	0	0.82900E-03	240053.0	4837825.1	447.0	2.65	4.65	2.47	NO	MONTH			
AELFS24A	0	0.40100E-01	239830.5	4837770.0	446.2	3.05	2.13	2.84	NO				
AELFS24B	0	0.40100E-01	239828.2	4837742.5	445.9	3.05	2.13	2.84	NO				
01100026	0	0.54300E+01	237797.6	4840863.5	472.0	10.00	20.00	10.00	NO				
10500051	0	0.54100E+01	257491.3	4858037.0	518.0	10.00	20.00	10.00	NO				
10500054	0	0.51400E-02	289353.0	4834470.0	479.0	10.00	20.00	10.00	NO				
11700015	0	0.26800E+01	233556.5	4875363.5	528.0	10.00	20.00	10.00	NO				
11700018	0	0.14200E+00	236063.2	4875374.0	534.4	10.00	20.00	10.00	NO				
11700023	0	0.54700E+00	244616.3	4886952.0	535.0	10.00	20.00	10.00	NO				
13300017	0	0.51700E+01	227518.1	4826756.5	453.0	10.00	20.00	10.00	NO				
13300018	0	0.54900E-01	240995.4	4839838.0	458.8	10.00	20.00	10.00	NO				
13300020	0	0.19400E-01	227518.1	4826756.5	453.0	10.00	20.00	10.00	NO				
SD000004	0	0.13200E+00	194373.0	4842723.0	484.2	20.00	20.00	10.00	NO				
SD000005	0	0.17600E-01	196043.0	4842135.0	475.7	10.00	20.00	10.00	NO				

**MODELOPTs: RegDFAULT CONC

ELEV

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs																																																																																																																																																																																																										
ALL	AELRA01	AELRA02	AELRA03	AELRA04	AELRA05	AELRA06	AELRB01	AELRB02	AELRB03	AELRB04	AELRB05	AELRB06	AELRB07	AELRB08	AELRB09	AELRB10	AELRB11	AELRB12	AELRB13	AELRC01	AELRC02	AELRC03	AELRC04	AELRC05	AELRC06	AELRC07	AELRD01	AELRD02	AELRD03	AELRD04	AELRD05	AELRD06	AELRD07	AELRE01	AELRE02	AELRE03	AELRE04	AELRF01	AELRF02	AELRF03	AELRF04	AELRF05	AELRF06	AELRF07	AELRF08	AELRG01	AELRG02	AELRG03	AELRG04	AELRG05	AELRG06	AELRH01	AELRH02	AELRH03	AELRH04	AELRH05	AELRH06	AELRH07	AELRH08	AELRH09	AELRH10	AELRH11	AELRH12	AELRH13	AELRI01	AELRI02	AELRI03	AELRI04	AELRK01	AELRK02	AELRK03	AELRK04	AELRK05	AELRK06	AELRK07	AELRK08	AELRK09	AELRK10	AELRJ01	AELRJ02	AELRJ03	AELRJ04	AELRJ05	AELRJ06	AELFS24A	AELFS24B	01100026	10500051	10500054	11700015	11700018	11700023	13300017	13300018	13300020	SD000004	SD000005	AELSV001	AELSV002	AELSV004	AELSV011	AELSV014	AELSV017	AELFS06A	AELFS06B	AELSV015	AELFS06C	AELSV015	AELSV001	AELSV002	AELSV004	AELSV011	AELSV014	AELSV017	AELFS24A	AELFS24B	AELFS06A	AELFS06B	AELFS06C	AELRA01	AELRA02	AELRA03	AELRA04	AELRA05	AELRA06	AELRB01	AELRB02	AELRB03	AELRB04	AELRB05	AELRB06	AELRB07	AELRB08	AELRB09	AELRB10	AELRB11	AELRB12	AELRB13	AELRC01	AELRC02	AELRC03	AELRC04	AELRC05	AELRC06	AELRC07	AELRD01	AELRD02	AELRD03	AELRD04	AELRD05	AELRD06	AELRD07	AELRE01	AELRE02	AELRE03	AELRE04	AELRF01	AELRF02	AELRF03	AELRF04	AELRF05	AELRF06	AELRF07	AELRF08	AELRG01	AELRG02	AELRG03	AELRG04	AELRG05	AELRG06	AELRH01	AELRH02	AELRH03	AELRH04	AELRH05	AELRH06	AELRH07	AELRH08	AELRH09	AELRH10	AELRH11	AELRH12	AELRH13	AELRI01	AELRI02	AELRI03	AELRI04	AELRK01	AELRK02	AELRK03	AELRK04	AELRK05	AELRK06	AELRK07	AELRK08	AELRK09	AELRK10	AELRJ01	AELRJ02	AELRJ03	AELRJ04	AELRJ05	AELRJ06

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*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
AEL	AELRA01 , AELRA02 , AELRA03 , AELRA04 , AELRA05 , AELRA06 , AELRB01 , AELRB02 , AELRB03 , AELRB04 , AELRB05 , AELRB06 , AELRB07 , AELRB08 , AELRB09 , AELRB10 , AELRB11 , AELRB12 , AELRB13 , AELRC01 , AELRC02 , AELRC03 , AELRC04 , AELRC05 , AELRC06 , AELRC07 , AELRD01 , AELRD02 , AELRD03 , AELRD04 , AELRD05 , AELRD06 , AELRD07 , AELRE01 , AELRE02 , AELRE03 , AELRE04 , AELRF01 , AELRF02 , AELRF03 , AELRF04 , AELRF05 , AELRF06 , AELRF07 , AELRF08 , AELRG01 , AELRG02 , AELRG03 , AELRG04 , AELRG05 , AELRG06 , AELRH01 , AELRH02 , AELRH03 , AELRH04 , AELRH05 , AELRH06 , AELRH07 , AELRH08 , AELRH09 , AELRH10 , AELRH11 , AELRH12 , AELRH13 , AELRI01 , AELRI02 , AELRI03 , AELRI04 , AELRK01 , AELRK02 , AELRK03 , AELRK04 , AELRK05 , AELRK06 , AELRK07 , AELRK08 , AELRK09 , AELRK10 , AELRJ01 , AELRJ02 , AELRJ03 , AELRJ04 , AELRJ05 , AELRJ06 , AELFS24A , AELFS24B , AELSV001 , AELSV002 , AELSV004 , AELSV011 , AELSV014 , AELSV017 , AELFS06A , AELFS06B , AELSV015 , AELFS06C ,
AELSV001	AELSV001 ,
AELSV002	AELSV002 ,
AELSV004	AELSV004 ,
AELSV011	AELSV011 ,
AELSV014	AELSV014 ,
AELSV017	AELSV017 ,

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*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

THIS & MOST OTHER ITEMS NOT PRINTED TO SAVE SPACE

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *
LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE	-- RECEPTOR LOCATION --		DISTANCE
ID	XR (METERS)	YR (METERS)	(METERS)
AELRA01	240051.3	4837692.1	-3.73
AELRA01	240051.8	4837701.9	-5.30
AELRJ06	240057.7	4837819.9	-2.98
AELRJ06	240058.2	4837829.8	-3.01

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*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: P:\Clients\Gevo\MN Luverne\102401_0018 Regulatory Applicability\Modeling\Novem Met Version: 06341

Profile file: P:\Clients\Gevo\MN Luverne\102401_0018 Regulatory Applicability\Modeling\Novem

Surface format: FREE

Profile format: FREE

Surface station no.: 99999

Upper air station no.: 94983

Name: UNKNOWN

Name: UNKNOWN

Year: 2004

Year: 2004

First 24 hours of scalar data

YR	MO	DY	JDY	HR	HO	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT
04	01	01	1	01	-39.9	0.335	-9.000	-9.000	-999.	447.	85.4	0.02	0.49	1.00	5.70	161.	10.0	268.1	2.0			
04	01	01	1	02	-32.2	0.270	-9.000	-9.000	-999.	325.	55.5	0.01	0.49	1.00	5.10	138.	10.0	268.1	2.0			
04	01	01	1	03	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	144.	10.0	268.1	2.0			
04	01	01	1	04	-27.9	0.235	-9.000	-9.000	-999.	267.	41.8	0.01	0.49	1.00	4.60	143.	10.0	268.1	2.0			
04	01	01	1	05	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	143.	10.0	268.1	2.0			
04	01	01	1	06	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	142.	10.0	268.1	2.0			
04	01	01	1	07	-48.2	0.405	-9.000	-9.000	-999.	593.	124.6	0.02	0.49	1.00	6.70	155.	10.0	268.1	2.0			
04	01	01	1	08	-27.9	0.235	-9.000	-9.000	-999.	281.	41.8	0.01	0.49	1.00	4.60	143.	10.0	268.1	2.0			
04	01	01	1	09	-26.6	0.238	-9.000	-9.000	-999.	267.	45.7	0.01	0.49	0.83	4.60	147.	10.0	268.1	2.0			
04	01	01	1	10	-21.8	0.351	-9.000	-9.000	-999.	479.	179.2	0.02	0.49	0.69	5.70	161.	10.0	271.1	2.0			
04	01	01	1	11	1.1	0.326	0.041	0.009	2.	429.	-2960.5	0.02	0.49	0.64	5.10	184.	10.0	273.1	2.0			
04	01	01	1	12	8.6	0.368	0.173	0.008	22.	513.	-524.9	0.02	0.49	0.62	5.70	196.	10.0	274.1	2.0			
04	01	01	1	13	10.7	0.400	0.239	0.007	46.	582.	-540.5	0.02	0.49	0.62	6.20	203.	10.0	274.1	2.0			
04	01	01	1	14	7.4	0.367	0.235	0.008	63.	513.	-602.8	0.02	0.49	0.63	5.70	209.	10.0	275.1	2.0			
04	01	01	1	15	-2.1	0.309	-9.000	-9.000	-999.	396.	1248.1	0.01	0.49	0.65	5.10	222.	10.0	276.1	2.0			
04	01	01	1	16	-16.3	0.222	-9.000	-9.000	-999.	243.	60.2	0.01	0.49	0.71	4.10	214.	10.0	276.1	2.0			
04	01	01	1	17	-7.3	0.079	-9.000	-9.000	-999.	69.	6.1	0.01	0.49	0.88	2.60	231.	10.0	274.1	2.0			
04	01	01	1	18	-10.5	0.094	-9.000	-9.000	-999.	67.	7.2	0.01	0.49	1.00	3.10	217.	10.0	273.1	2.0			
04	01	01	1	19	-6.8	0.075	-9.000	-9.000	-999.	48.	5.6	0.01	0.49	1.00	2.60	254.	10.0	273.1	2.0			
04	01	01	1	20	-21.9	0.188	-9.000	-9.000	-999.	187.	27.2	0.01	0.49	1.00	4.10	267.	10.0	273.1	2.0			
04	01	01	1	21	-26.7	0.229	-9.000	-9.000	-999.	251.	40.4	0.01	0.49	1.00	4.60	290.	10.0	273.1	2.0			
04	01	01	1	22	-2.3	0.044	-9.000	-9.000	-999.	86.	3.3	0.01	0.49	1.00	1.50	282.	10.0	272.1	2.0			
04	01	01	1	23	-25.0	0.213	-9.000	-9.000	-999.	226.	34.8	0.02	0.49	1.00	4.10	200.	10.0	271.1	2.0			
04	01	01	1	24	-11.3	0.099	-9.000	-9.000	-999.	78.	7.7	0.02	0.49	1.00	3.10	200.	10.0	271.1	2.0			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
04	01	01	01	10.0	1	161.	5.70	268.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\20110301_Files\PM25_SiltLoading2GramsPerSquareMeter\AEL_PM25-04.aml

Misc. Input (ECHO, INCLUDED, meteorology, etc.)

CO TITLEONE Agri-Energy LLC - PM2.5 24 hour and Annual

CO TITLETWO Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM to 7PM during winter RTO at 5lb/hr

CO MODELOPT DFAULT CONC

SO EMISFACT	AELRA01	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA01	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRA02	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA02	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRA03	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA03	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRA04	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA04	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRA05	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA05	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRA06	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRA06	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB01	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB01	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB02	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB02	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB03	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB03	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB04	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB04	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB05	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB05	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB06	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB06	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB07	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB07	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB08	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB08	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB09	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB09	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB10	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB10	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB11	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB11	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB12	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB12	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRB13	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRB13	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRC01	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC01	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRC02	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC02	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRC03	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC03	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRC04	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC04	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRC05	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC05	MONTH	1.00	1.00	1.00	1.00					
SO EMISFACT	AELRC06	MONTH	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SO EMISFACT	AELRC06	MONTH	1.00	1.00	1.00	1.00					

*** AERMOD - VERSION 09292 ***

*** Agri-Energy LLC - PM2.5 24 hour and Annual

02/27/11

*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM

13:06:40

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**MODELOPTs: RegDFault CONC

ELEV

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BLDG EXISTS	URBAN SOURCE	CAP/HOR	EMIS RATE SCALAR VARY BY
AELSV001	0	0.47000E-01	239811.1	4837756.5	446.2	18.29	0.00	32.00	0.41	YES	NO	NO	
AELSV002	0	0.28000E-01	239912.5	4837742.0	446.3	3.66	0.00	37.51	0.30	YES	NO	NO	
AELSV004	0	0.63000E+00	239895.1	4837782.5	446.7	53.34	449.82	11.87	1.40	YES	NO	NO	
AELSV011	0	0.57000E-01	239919.9	4837796.0	446.9	12.19	444.26	16.56	0.76	YES	NO	NO	
AELSV014	0	0.15000E-01	239848.0	4837773.5	446.3	19.81	307.59	25.87	0.46	YES	NO	NO	
AELSV017	0	0.57000E-01	239919.9	4837806.0	447.0	12.19	444.26	4.93	1.40	YES	NO	NO	
AELFS06A	0	0.14300E-01	239907.8	4837859.5	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	
AELFS06B	0	0.14300E-01	239907.8	4837854.0	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	
AELSV015	0	0.39800E-01	239795.5	4837764.5	446.4	3.51	394.00	0.10	2.66	YES	NO	NO	SEASHR
AELFS06C	0	0.14300E-01	239907.8	4837864.6	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	

**MODELOPTs: RegDFAULT CONC

ELEV

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	*** VOLUME SOURCE DATA ***			URBAN SOURCE	EMISSION RATE	
					BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)		INIT. SZ (METERS)	SCALAR VARY BY
AELRA01	0	0.65100E-04	240049.2	4837698.0	446.8	2.20	4.65	2.05	NO	MONTH
AELRA02	0	0.65100E-04	240039.2	4837699.0	446.7	2.20	4.65	2.05	NO	MONTH
AELRA03	0	0.65100E-04	240029.3	4837700.0	446.6	2.20	4.65	2.05	NO	MONTH
AELRA04	0	0.65100E-04	240019.3	4837701.0	446.5	2.20	4.65	2.05	NO	MONTH
AELRA05	0	0.65100E-04	240009.4	4837702.0	446.4	2.20	4.65	2.05	NO	MONTH
AELRA06	0	0.65100E-04	239999.4	4837703.0	446.3	2.20	4.65	2.05	NO	MONTH
AELRB01	0	0.11300E-03	239994.4	4837705.0	446.3	2.46	4.65	2.29	NO	MONTH
AELRB02	0	0.11300E-03	239995.0	4837715.0	446.4	2.46	4.65	2.29	NO	MONTH
AELRB03	0	0.11300E-03	239995.6	4837725.0	446.5	2.46	4.65	2.29	NO	MONTH
AELRB04	0	0.11300E-03	239996.2	4837735.0	446.6	2.46	4.65	2.29	NO	MONTH
AELRB05	0	0.11300E-03	239996.8	4837744.9	446.7	2.46	4.65	2.29	NO	MONTH
AELRB06	0	0.11300E-03	239997.4	4837754.9	446.8	2.46	4.65	2.29	NO	MONTH
AELRB07	0	0.11300E-03	239998.0	4837764.9	447.0	2.46	4.65	2.29	NO	MONTH
AELRB08	0	0.11300E-03	239998.6	4837774.9	447.2	2.46	4.65	2.29	NO	MONTH
AELRB09	0	0.11300E-03	239999.2	4837784.9	447.4	2.46	4.65	2.29	NO	MONTH
AELRB10	0	0.11300E-03	239999.8	4837794.8	447.5	2.46	4.65	2.29	NO	MONTH
AELRB11	0	0.11300E-03	240000.4	4837804.8	447.6	2.46	4.65	2.29	NO	MONTH
AELRB12	0	0.11300E-03	240001.0	4837814.8	447.7	2.46	4.65	2.29	NO	MONTH
AELRB13	0	0.11300E-03	240001.6	4837824.8	447.8	2.46	4.65	2.29	NO	MONTH
AELRC01	0	0.62300E-04	239999.8	4837829.0	447.9	2.46	4.65	2.29	NO	MONTH
AELRC02	0	0.62300E-04	239989.8	4837829.8	447.9	2.46	4.65	2.29	NO	MONTH
AELRC03	0	0.62300E-04	239979.8	4837830.7	447.9	2.46	4.65	2.29	NO	MONTH
AELRC04	0	0.62300E-04	239969.9	4837831.5	447.8	2.46	4.65	2.29	NO	MONTH
AELRC05	0	0.62300E-04	239959.9	4837832.3	447.7	2.46	4.65	2.29	NO	MONTH
AELRC06	0	0.62300E-04	239949.9	4837833.1	447.6	2.46	4.65	2.29	NO	MONTH
AELRC07	0	0.62300E-04	239940.0	4837834.0	447.5	2.46	4.65	2.29	NO	MONTH
AELRD01	0	0.70400E-04	239938.6	4837834.0	447.5	2.46	4.65	2.29	NO	MONTH
AELRD02	0	0.70400E-04	239928.6	4837834.7	447.4	2.46	4.65	2.29	NO	MONTH
AELRD03	0	0.70400E-04	239918.6	4837835.3	447.3	2.46	4.65	2.29	NO	MONTH
AELRD04	0	0.70400E-04	239908.6	4837836.0	447.2	2.46	4.65	2.29	NO	MONTH
AELRD05	0	0.70400E-04	239898.7	4837836.6	447.1	2.46	4.65	2.29	NO	MONTH
AELRD06	0	0.70400E-04	239888.7	4837837.3	446.9	2.46	4.65	2.29	NO	MONTH
AELRD07	0	0.70400E-04	239878.7	4837838.0	446.9	2.46	4.65	2.29	NO	MONTH
AELRE01	0	0.51700E-04	239869.5	4837838.5	446.9	2.72	4.65	2.53	NO	MONTH
AELRE02	0	0.51700E-04	239859.5	4837838.7	446.9	2.72	4.65	2.53	NO	MONTH
AELRE03	0	0.51700E-04	239849.5	4837838.8	446.9	2.72	4.65	2.53	NO	MONTH
AELRE04	0	0.51700E-04	239840.0	4837839.0	446.9	2.72	4.65	2.53	NO	MONTH
AELRF01	0	0.51700E-04	239840.0	4837838.5	446.9	2.72	4.65	2.53	NO	MONTH
AELRF02	0	0.51700E-04	239836.8	4837829.0	446.8	2.72	4.65	2.53	NO	MONTH
AELRF03	0	0.51700E-04	239833.6	4837819.6	446.8	2.72	4.65	2.53	NO	MONTH

**MODELOPTs: RegDFAULT CONC

ELEV

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	*** VOLUME SOURCE DATA ***		BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR	EMISSION RATE VARY BY
			X (METERS)	Y (METERS)							
AELRF04	0	0.51700E-04	239832.9	4837809.6	446.8	2.72	4.65	2.53	NO	MONTH	
AELRF05	0	0.51700E-04	239832.3	4837799.6	446.8	2.72	4.65	2.53	NO	MONTH	
AELRF06	0	0.51700E-04	239831.7	4837789.6	446.6	2.72	4.65	2.53	NO	MONTH	
AELRF07	0	0.51700E-04	239831.0	4837779.6	446.4	2.72	4.65	2.53	NO	MONTH	
AELRF08	0	0.51700E-04	239830.5	4837771.0	446.2	2.72	4.65	2.53	NO	MONTH	
AELRG01	0	0.32200E-04	239828.5	4837741.0	445.9	2.72	4.65	2.53	NO	MONTH	
AELRG02	0	0.32200E-04	239828.4	4837731.0	445.8	2.72	4.65	2.53	NO	MONTH	
AELRG03	0	0.32200E-04	239828.2	4837721.0	445.7	2.72	4.65	2.53	NO	MONTH	
AELRG04	0	0.32200E-04	239837.2	4837719.4	445.7	2.72	4.65	2.53	NO	MONTH	
AELRG05	0	0.32200E-04	239847.2	4837718.7	445.7	2.72	4.65	2.53	NO	MONTH	
AELRG06	0	0.32200E-04	239857.2	4837718.0	445.8	2.72	4.65	2.53	NO	MONTH	
AELRH01	0	0.18900E-04	239870.1	4837835.5	446.9	2.16	4.65	2.01	NO	MONTH	
AELRH02	0	0.18900E-04	239869.1	4837825.5	446.8	2.16	4.65	2.01	NO	MONTH	
AELRH03	0	0.18900E-04	239868.1	4837815.6	446.8	2.16	4.65	2.01	NO	MONTH	
AELRH04	0	0.18900E-04	239867.2	4837805.6	446.7	2.16	4.65	2.01	NO	MONTH	
AELRH05	0	0.18900E-04	239866.2	4837795.7	446.6	2.16	4.65	2.01	NO	MONTH	
AELRH06	0	0.18900E-04	239865.3	4837785.7	446.5	2.16	4.65	2.01	NO	MONTH	
AELRH07	0	0.18900E-04	239864.3	4837775.8	446.4	2.16	4.65	2.01	NO	MONTH	
AELRH08	0	0.18900E-04	239863.3	4837765.8	446.3	2.16	4.65	2.01	NO	MONTH	
AELRH09	0	0.18900E-04	239862.4	4837755.9	446.2	2.16	4.65	2.01	NO	MONTH	
AELRH10	0	0.18900E-04	239861.4	4837745.9	446.1	2.16	4.65	2.01	NO	MONTH	
AELRH11	0	0.18900E-04	239860.4	4837736.0	446.0	2.16	4.65	2.01	NO	MONTH	
AELRH12	0	0.18900E-04	239859.5	4837726.0	445.9	2.16	4.65	2.01	NO	MONTH	
AELRH13	0	0.18900E-04	239858.8	4837719.5	445.8	2.16	4.65	2.01	NO	MONTH	
AELRI01	0	0.51100E-04	239859.4	4837717.0	445.8	2.46	4.65	2.29	NO	MONTH	
AELRI02	0	0.51100E-04	239869.3	4837715.7	445.9	2.46	4.65	2.29	NO	MONTH	
AELRI03	0	0.51100E-04	239879.2	4837714.4	446.0	2.46	4.65	2.29	NO	MONTH	
AELRI04	0	0.51100E-04	239889.2	4837713.2	446.0	2.46	4.65	2.29	NO	MONTH	
AELRK01	0	0.54000E-04	239899.1	4837711.9	446.0	2.20	4.65	2.05	NO	MONTH	
AELRK02	0	0.54000E-04	239909.0	4837710.6	446.0	2.20	4.65	2.05	NO	MONTH	
AELRK03	0	0.54000E-04	239918.9	4837709.3	446.0	2.20	4.65	2.05	NO	MONTH	
AELRK04	0	0.54000E-04	239928.8	4837708.0	446.0	2.20	4.65	2.05	NO	MONTH	
AELRK05	0	0.54000E-04	239938.8	4837707.0	446.0	2.20	4.65	2.05	NO	MONTH	
AELRK06	0	0.54000E-04	239948.8	4837706.3	446.1	2.20	4.65	2.05	NO	MONTH	
AELRK07	0	0.54000E-04	239958.7	4837705.5	446.2	2.20	4.65	2.05	NO	MONTH	
AELRK08	0	0.54000E-04	239968.7	4837704.8	446.3	2.20	4.65	2.05	NO	MONTH	
AELRK09	0	0.54000E-04	239978.7	4837704.0	446.3	2.20	4.65	2.05	NO	MONTH	
AELRK10	0	0.54000E-04	239988.6	4837703.2	446.3	2.20	4.65	2.05	NO	MONTH	
AELRJ01	0	0.51100E-04	240003.2	4837829.0	447.9	2.46	4.65	2.29	NO	MONTH	
AELRJ02	0	0.51100E-04	240013.1	4837828.2	447.9	2.46	4.65	2.29	NO	MONTH	

*** AERMOD - VERSION 09292 ***

*** Agri-Energy LLC - PM2.5 24 hour and Annual

02/27/11

*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM

13:06:40

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**MODELOPTs: RegDFAULT CONC

ELEV

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
AELRJ03	0	0.51100E-04	240023.1	4837827.5	447.9	2.46	4.65	2.29	NO	MONTH
AELRJ04	0	0.51100E-04	240033.1	4837826.7	447.9	2.46	4.65	2.29	NO	MONTH
AELRJ05	0	0.51100E-04	240043.0	4837825.9	447.6	2.46	4.65	2.29	NO	MONTH
AELRJ06	0	0.51100E-04	240053.0	4837825.1	447.0	2.46	4.65	2.29	NO	MONTH
AELFS24A	0	0.31000E-02	239830.5	4837770.0	446.2	3.05	2.13	2.84	NO	
AELFS24B	0	0.31000E-02	239828.2	4837742.5	445.9	3.05	2.13	2.84	NO	
01100026	0	0.54300E+01	237797.6	4840863.5	472.0	10.00	20.00	10.00	NO	
10500051	0	0.54100E+01	257491.3	4858037.0	518.0	10.00	20.00	10.00	NO	
10500054	0	0.51400E-02	289353.0	4834470.0	479.0	10.00	20.00	10.00	NO	
11700015	0	0.26800E+01	233556.5	4875363.5	528.0	10.00	20.00	10.00	NO	
11700018	0	0.14200E+00	236063.2	4875374.0	534.4	10.00	20.00	10.00	NO	
11700023	0	0.54700E+00	244616.3	4886952.0	535.0	10.00	20.00	10.00	NO	
13300017	0	0.51700E+01	227518.1	4826756.5	453.0	10.00	20.00	10.00	NO	
13300018	0	0.54900E-01	240995.4	4839838.0	458.8	10.00	20.00	10.00	NO	
13300020	0	0.19400E-01	227518.1	4826756.5	453.0	10.00	20.00	10.00	NO	
SD000004	0	0.13200E+00	194373.0	4842723.0	484.2	20.00	20.00	10.00	NO	
SD000005	0	0.17600E-01	196043.0	4842135.0	475.7	10.00	20.00	10.00	NO	

**MODELOPTs: RegDFAULT CONC

ELEV

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs																																																																																																																																																																																																								
ALL	AELRA01	AELRA02	AELRA03	AELRA04	AELRA05	AELRA06	AELRB01	AELRB02	AELRB03	AELRB04	AELRB05	AELRB06	AELRB07	AELRB08	AELRB09	AELRB10	AELRB11	AELRB12	AELRB13	AELRC01	AELRC02	AELRC03	AELRC04	AELRC05	AELRC06	AELRC07	AELRD01	AELRD02	AELRD03	AELRD04	AELRD05	AELRD06	AELRD07	AELRE01	AELRE02	AELRE03	AELRF01	AELRF02	AELRF03	AELRF04	AELRF05	AELRF06	AELRF07	AELRF08	AELRG01	AELRG02	AELRG03	AELRG04	AELRG05	AELRG06	AELRH01	AELRH02	AELRH03	AELRH04	AELRH05	AELRH06	AELRH07	AELRH08	AELRH09	AELRH10	AELRH11	AELRH12	AELRH13	AELRI01	AELRI02	AELRI03	AELRI04	AELRK01	AELRK02	AELRK03	AELRK04	AELRK05	AELRK06	AELRK07	AELRK08	AELRK09	AELRK10	AELRJ01	AELRJ02	AELRJ03	AELRJ04	AELRJ05	AELRJ06	AELFS24A	AELFS24B	01100026	10500051	10500054	11700015	11700018	11700023	13300017	13300018	13300020	SD000004	SD000005	AELSV001	AELSV002	AELSV004	AELSV011	AELSV014	AELSV017	AELFS06A	AELFS06B	AELSV015	AELFS06C	AELSV015	AELSV001	AELSV002	AELSV004	AELSV011	AELSV014	AELSV017	AELFS24A	AELFS24B	AELFS06A	AELFS06B	AELFS06C	AELRA01	AELRA02	AELRA03	AELRA04	AELRA05	AELRA06	AELRB01	AELRB02	AELRB03	AELRB04	AELRB05	AELRB06	AELRB07	AELRB08	AELRB09	AELRB10	AELRB11	AELRB12	AELRB13	AELRC01	AELRC02	AELRC03	AELRC04	AELRC05	AELRC06	AELRC07	AELRD01	AELRD02	AELRD03	AELRD04	AELRD05	AELRD06	AELRD07	AELRE01	AELRE02	AELRE03	AELRF01	AELRF02	AELRF03	AELRF04	AELRF05	AELRF06	AELRF07	AELRF08	AELRG01	AELRG02	AELRG03	AELRG04	AELRG05	AELRG06	AELRH01	AELRH02	AELRH03	AELRH04	AELRH05	AELRH06	AELRH07	AELRH08	AELRH09	AELRH10	AELRH11	AELRH12	AELRH13	AELRI01	AELRI02	AELRI03	AELRI04	AELRK01	AELRK02	AELRK03	AELRK04	AELRK05	AELRK06	AELRK07	AELRK08	AELRK09	AELRK10	AELRJ01	AELRJ02	AELRJ03	AELRJ04	AELRJ05	AELRJ06

*** AERMOD - VERSION 09292 ***

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02/27/11

*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM

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**MODELOPTs: RegDEFAULT CONC

ELEV

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

AEL AELRA01 , AELRA02 , AELRA03 , AELRA04 , AELRA05 , AELRA06 , AELRB01 , AELRB02 , AELRB03 , AELRB04 , AELRB05 , AELRB06 ,
AELRB07 , AELRB08 , AELRB09 , AELRB10 , AELRB11 , AELRB12 , AELRB13 , AELRC01 , AELRC02 , AELRC03 , AELRC04 , AELRC05 ,
AELRC06 , AELRC07 , AELRD01 , AELRD02 , AELRD03 , AELRD04 , AELRD05 , AELRD06 , AELRD07 , AELRE01 , AELRE02 , AELRE03 ,
AELRE04 , AELRF01 , AELRF02 , AELRF03 , AELRF04 , AELRF05 , AELRF06 , AELRF07 , AELRF08 , AELRG01 , AELRG02 , AELRG03 ,
AELRG04 , AELRG05 , AELRG06 , AELRH01 , AELRH02 , AELRH03 , AELRH04 , AELRH05 , AELRH06 , AELRH07 , AELRH08 , AELRH09 ,
AELRH10 , AELRH11 , AELRH12 , AELRH13 , AELRI01 , AELRI02 , AELRI03 , AELRI04 , AELRK01 , AELRK02 , AELRK03 , AELRK04 ,
AELRK05 , AELRK06 , AELRK07 , AELRK08 , AELRK09 , AELRK10 , AELRJ01 , AELRJ02 , AELRJ03 , AELRJ04 , AELRJ05 , AELRJ06 ,
AELFS24A, AELFS24B, AELSV001, AELSV002, AELSV004, AELSV011, AELSV014, AELSV017, AELFS06A, AELFS06B, AELSV015, AELFS06C,
AELSV001 AELSV001,
AELSV002 AELSV002,
AELSV004 AELSV004,
AELSV011 AELSV011,
AELSV014 AELSV014,
AELSV017 AELSV017,

*** AERMOD - VERSION 09292 ***

*** Agri-Energy LLC - PM2.5 24 hour and Annual
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM

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**MODELOPTs: RegDFAULT CONC

ELEV

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***
THIS & MOST OTHER ITEMS NOT PRINTED TO SAVE SPACE

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *
LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE	-- RECEPTOR LOCATION --		DISTANCE
ID	XR (METERS)	YR (METERS)	(METERS)
--- AELRA01	240051.3	4837692.1	-3.73
AELRA01	240051.8	4837701.9	-5.30
AELRJ06	240057.7	4837819.9	-2.98
AELRJ06	240058.2	4837829.8	-3.01

*** AERMOD - VERSION 09292 ***

*** Agri-Energy LLC - PM2.5 24 hour and Annual
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM

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**MODELOPTs: RegDFAULT CONC

ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: P:\Clients\Gevo\MN Luverne\102401_0018 Regulatory Applicability\Modeling\Novem Met Version: 06341
Profile file: P:\Clients\Gevo\MN Luverne\102401_0018 Regulatory Applicability\Modeling\Novem
Surface format: FREE
Profile format: FREE
Surface station no.: 99999 Upper air station no.: 94983
Name: UNKNOWN Name: UNKNOWN
Year: 2004 Year: 2004

First 24 hours of scalar data

YR	MO	DY	JDY	HR	HO	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT
04	01	01	1	01	-39.9	0.335	-9.000	-9.000	-999.	447.	85.4	0.02	0.49	1.00	5.70	161.	10.0	268.1	2.0			
04	01	01	1	02	-32.2	0.270	-9.000	-9.000	-999.	325.	55.5	0.01	0.49	1.00	5.10	138.	10.0	268.1	2.0			
04	01	01	1	03	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	144.	10.0	268.1	2.0			
04	01	01	1	04	-27.9	0.235	-9.000	-9.000	-999.	267.	41.8	0.01	0.49	1.00	4.60	143.	10.0	268.1	2.0			
04	01	01	1	05	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	143.	10.0	268.1	2.0			
04	01	01	1	06	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	142.	10.0	268.1	2.0			
04	01	01	1	07	-48.2	0.405	-9.000	-9.000	-999.	593.	124.6	0.02	0.49	1.00	6.70	155.	10.0	268.1	2.0			
04	01	01	1	08	-27.9	0.235	-9.000	-9.000	-999.	281.	41.8	0.01	0.49	1.00	4.60	143.	10.0	268.1	2.0			
04	01	01	1	09	-26.6	0.238	-9.000	-9.000	-999.	267.	45.7	0.01	0.49	0.83	4.60	147.	10.0	268.1	2.0			
04	01	01	1	10	-21.8	0.351	-9.000	-9.000	-999.	479.	179.2	0.02	0.49	0.69	5.70	161.	10.0	271.1	2.0			
04	01	01	1	11	1.1	0.326	0.041	0.009	2.	429.	-2960.5	0.02	0.49	0.64	5.10	184.	10.0	273.1	2.0			
04	01	01	1	12	8.6	0.368	0.173	0.008	22.	513.	-524.9	0.02	0.49	0.62	5.70	196.	10.0	274.1	2.0			
04	01	01	1	13	10.7	0.400	0.239	0.007	46.	582.	-540.5	0.02	0.49	0.62	6.20	203.	10.0	274.1	2.0			
04	01	01	1	14	7.4	0.367	0.235	0.008	63.	513.	-602.8	0.02	0.49	0.63	5.70	209.	10.0	275.1	2.0			
04	01	01	1	15	-2.1	0.309	-9.000	-9.000	-999.	396.	1248.1	0.01	0.49	0.65	5.10	222.	10.0	276.1	2.0			
04	01	01	1	16	-16.3	0.222	-9.000	-9.000	-999.	243.	60.2	0.01	0.49	0.71	4.10	214.	10.0	276.1	2.0			
04	01	01	1	17	-7.3	0.079	-9.000	-9.000	-999.	69.	6.1	0.01	0.49	0.88	2.60	231.	10.0	274.1	2.0			
04	01	01	1	18	-10.5	0.094	-9.000	-9.000	-999.	67.	7.2	0.01	0.49	1.00	3.10	217.	10.0	273.1	2.0			
04	01	01	1	19	-6.8	0.075	-9.000	-9.000	-999.	48.	5.6	0.01	0.49	1.00	2.60	254.	10.0	273.1	2.0			
04	01	01	1	20	-21.9	0.188	-9.000	-9.000	-999.	187.	27.2	0.01	0.49	1.00	4.10	267.	10.0	273.1	2.0			
04	01	01	1	21	-26.7	0.229	-9.000	-9.000	-999.	251.	40.4	0.01	0.49	1.00	4.60	290.	10.0	273.1	2.0			
04	01	01	1	22	-2.3	0.044	-9.000	-9.000	-999.	86.	3.3	0.01	0.49	1.00	1.50	282.	10.0	272.1	2.0			
04	01	01	1	23	-25.0	0.213	-9.000	-9.000	-999.	226.	34.8	0.02	0.49	1.00	4.10	200.	10.0	271.1	2.0			
04	01	01	1	24	-11.3	0.099	-9.000	-9.000	-999.	78.	7.7	0.02	0.49	1.00	3.10	200.	10.0	271.1	2.0			

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
04 01 01 01 10.0 1 161. 5.70 268.2 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)

X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\Dennis_2011GVL\GVL_FP25.OUT

Misc. Input (ECHO, INCLUDED, meteorology, etc.)

CO TITLEONE GVL 24HR FP25 NAAQS w/BG (Day-by-Day PM2.5 BAM) (21FEB2011 DATA)

CO TITLETWO GVL 24HR FP25 NAAQS w/BG (Day-by-Day PM2.5 BAM) (21FEB2011 DATA)

CO MODELOPT DFAULT CONC

SO BACKGRND HOURLY HrlyPM25.tst

** BACKGRND SEASON 25 25 25 25

SO BACKUNIT UG/M3

** INCLUDED X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\Dennis_2011GVL\240_4838.P24

** INCLUDED X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\Dennis_2011GVL\GVL_PM25.TMP

SO INCLUDED X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\Dennis_2011GVL\GVL_FP25.TST

** EMISFACT 00000000-99999999 SEASON 4*0.5

** EMISFACT AA000000-ZZ999999 SEASON 4*0.5

SO SRCGROUP FAR_SRCS 00000000-99999999 SD000000-SD999999

SO SRCGROUP BACKGRND BACKGROUND

SO SRCGROUP BACKGRND BACKGROUND

SO SRCGROUP ALL BACKGROUND

RE INCLUDED X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\Dennis_2011GVL\RECEPTOR.FIL

ME SURFFILE MJQMPX5Y0408.SFC

ME PROFFILE MJQMPX5Y0408.PFL

ME SURFDATA 99999 2004 KMJQ_JACKSON_MN

ME UAIRDATA 94983 2004 MPX

ME PROFBASE 1447 FEET

OU RECTABLE ALLAVE 8TH

OU MAXDCONT ALL 8 THRESH 0.0 GVL_FP25.ABC

X:\Agency_Files\Outcomes\Risk_Eval_Air_Mod\Air_Modeling\Projects\13300023_Gevo_AgriEnergy_Luverne\Dennis_2011GVL\GVL_FP25.OUT

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*** AERMOD - VERSION B10363 ***      *** GVL 24HR FP25 NAAQS w/BG (Day-by-Day PM2.5 BAM) (21FEB2011 DATA)      ***      02/22/11
*** GVL 24HR FP25 NAAQS w/BG (Day-by-Day PM2.5 BAM) (21FEB2011 DATA)      ***      07:39:29
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**MODELOPTs: RegDEFAULT CONC

ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

**Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --

**NO GAS DEPOSITION Data Provided.

**NO PARTICLE DEPOSITION Data Provided.

**Model Uses NO DRY DEPLETION. DRYDPLT = F

**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Uses Regulatory DEFAULT Options:

1. Stack-tip Downwash.
2. Model Accounts for ELEVated Terrain Effects.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR
and Calculates ANNUAL Averages

**This Run Includes: 107 Source(s); 9 Source Group(s); and 644 Receptor(s)

**This Run Includes BACKGRND Concentrations Varying by HOURLY for 2 Source Group(s)

**The Model Assumes A Pollutant Type of: PM25

**Note that special processing requirements apply

for the 24-hour PM2.5 NAAQS - check available guidance.

Model will process user-specified ranks of high 24-hour
values averaged across the number of years modeled, and
the multi-year average of individual ANNUAL values,
averaged across the number of years modeled.

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of ANNUAL Averages by Receptor

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

Model Outputs External File(s) of Contributions to Maximum Daily Values Paired in Time & Space (MAXDCONT Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours

m for Missing Hours

b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 441.05 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0

Emission Units = GRAMS/SEC

; Emission Rate Unit Factor = 0.10000E+07

Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 4.8 MB of RAM.

*** AERMOD - VERSION B10363 ***

*** GVL 24HR FP25 NAAQS w/BG (Day-by-Day PM2.5 BAM) (21FEB2011 DATA)

02/22/11

*** GVL 24HR FP25 NAAQS w/BG (Day-by-Day PM2.5 BAM) (21FEB2011 DATA)

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**MODELOPTs: RegDEFAULT CONC

ELEV

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BLDG EXISTS	URBAN SOURCE	CAP/ HOR	EMIS RATE SCALAR VARY BY
AELSV001	0	0.47000E-01	239811.1	4837756.5	446.2	18.29	0.00	32.00	0.41	YES	NO	NO	
AELSV002	0	0.28000E-01	239912.5	4837742.0	446.3	3.66	0.00	37.51	0.30	YES	NO	NO	
AELSV004	0	0.63000E+00	239895.1	4837782.5	446.7	53.34	449.82	11.87	1.40	YES	NO	NO	
AELSV011	0	0.57000E-01	239919.9	4837796.0	446.9	12.19	444.26	16.56	0.76	YES	NO	NO	
AELSV014	0	0.15000E-01	239848.0	4837773.5	446.3	19.81	307.59	25.87	0.46	YES	NO	NO	
AELSV017	0	0.57000E-01	239919.9	4837806.0	447.0	12.19	444.26	4.93	1.40	YES	NO	NO	
AELFS06A	0	0.14300E-01	239907.8	4837859.5	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	
AELFS06B	0	0.14300E-01	239907.8	4837854.0	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	
AELSV015	0	0.39800E-01	239795.5	4837764.5	446.4	3.51	394.00	0.10	2.66	YES	NO	NO	SEASHR
AELFS06C	0	0.14300E-01	239907.8	4837864.6	447.3	8.84	0.00	7.52	4.88	YES	NO	NO	

**MODELOPTs: RegDFAULT CONC

*** VOLUME SOURCE DATA ***										
SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	ELEV		BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
			X (METERS)	Y (METERS)						
AELRA01	0	0.35300E-03	240049.2	4837698.0	446.8	2.55	4.65	2.37	NO	MONTH
AELRA02	0	0.35300E-03	240039.2	4837699.0	446.7	2.55	4.65	2.37	NO	MONTH
AELRA03	0	0.35300E-03	240029.3	4837700.0	446.6	2.55	4.65	2.37	NO	MONTH
AELRA04	0	0.35300E-03	240019.3	4837701.0	446.5	2.55	4.65	2.37	NO	MONTH
AELRA05	0	0.35300E-03	240009.4	4837702.0	446.4	2.55	4.65	2.37	NO	MONTH
AELRA06	0	0.35300E-03	239999.4	4837703.0	446.3	2.55	4.65	2.37	NO	MONTH
AELRB01	0	0.54100E-03	239994.4	4837705.0	446.3	2.65	4.65	2.47	NO	MONTH
AELRB02	0	0.54100E-03	239995.0	4837715.0	446.4	2.65	4.65	2.47	NO	MONTH
AELRB03	0	0.54100E-03	239995.6	4837725.0	446.5	2.65	4.65	2.47	NO	MONTH
AELRB04	0	0.54100E-03	239996.2	4837735.0	446.6	2.65	4.65	2.47	NO	MONTH
AELRB05	0	0.54100E-03	239996.8	4837744.9	446.7	2.65	4.65	2.47	NO	MONTH
AELRB06	0	0.54100E-03	239997.4	4837754.9	446.8	2.65	4.65	2.47	NO	MONTH
AELRB07	0	0.54100E-03	239998.0	4837764.9	447.0	2.65	4.65	2.47	NO	MONTH
AELRB08	0	0.54100E-03	239998.6	4837774.9	447.2	2.65	4.65	2.47	NO	MONTH
AELRB09	0	0.54100E-03	239999.2	4837784.9	447.4	2.65	4.65	2.47	NO	MONTH
AELRB10	0	0.54100E-03	239999.8	4837794.8	447.5	2.65	4.65	2.47	NO	MONTH
AELRB11	0	0.54100E-03	240000.4	4837804.8	447.6	2.65	4.65	2.47	NO	MONTH
AELRB12	0	0.54100E-03	240001.0	4837814.8	447.7	2.65	4.65	2.47	NO	MONTH
AELRB13	0	0.54100E-03	240001.6	4837824.8	447.8	2.65	4.65	2.47	NO	MONTH
AELRC01	0	0.32300E-03	239999.8	4837829.0	447.9	2.65	4.65	2.47	NO	MONTH
AELRC02	0	0.32300E-03	239989.8	4837829.8	447.9	2.65	4.65	2.47	NO	MONTH
AELRC03	0	0.32300E-03	239979.8	4837830.7	447.9	2.65	4.65	2.47	NO	MONTH
AELRC04	0	0.32300E-03	239969.9	4837831.5	447.8	2.65	4.65	2.47	NO	MONTH
AELRC05	0	0.32300E-03	239959.9	4837832.3	447.7	2.65	4.65	2.47	NO	MONTH
AELRC06	0	0.32300E-03	239949.9	4837833.1	447.6	2.65	4.65	2.47	NO	MONTH
AELRC07	0	0.32300E-03	239940.0	4837834.0	447.5	2.65	4.65	2.47	NO	MONTH
AELRD01	0	0.35100E-03	239938.6	4837834.0	447.5	2.65	4.65	2.47	NO	MONTH
AELRD02	0	0.35100E-03	239928.6	4837834.7	447.4	2.65	4.65	2.47	NO	MONTH
AELRD03	0	0.35100E-03	239918.6	4837835.3	447.3	2.65	4.65	2.47	NO	MONTH
AELRD04	0	0.35100E-03	239908.6	4837836.0	447.2	2.65	4.65	2.47	NO	MONTH
AELRD05	0	0.35100E-03	239898.7	4837836.6	447.1	2.65	4.65	2.47	NO	MONTH
AELRD06	0	0.35100E-03	239888.7	4837837.3	446.9	2.65	4.65	2.47	NO	MONTH
AELRD07	0	0.35100E-03	239878.7	4837838.0	446.9	2.65	4.65	2.47	NO	MONTH
AELRE01	0	0.29100E-03	239869.5	4837838.5	446.9	2.72	4.65	2.53	NO	MONTH
AELRE02	0	0.29100E-03	239859.5	4837838.7	446.9	2.72	4.65	2.53	NO	MONTH
AELRE03	0	0.29100E-03	239849.5	4837838.8	446.9	2.72	4.65	2.53	NO	MONTH
AELRE04	0	0.29100E-03	239840.0	4837839.0	446.9	2.72	4.65	2.53	NO	MONTH
AELRF01	0	0.29100E-03	239840.0	4837838.5	446.9	2.72	4.65	2.53	NO	MONTH
AELRF02	0	0.29100E-03	239836.8	4837829.0	446.8	2.72	4.65	2.53	NO	MONTH
AELRF03	0	0.29100E-03	239833.6	4837819.6	446.8	2.72	4.65	2.53	NO	MONTH

**MODELOPTs: RegDFAULT CONC

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	*** VOLUME SOURCE DATA ***		ELEV		INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
			X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)				
AELRF04	0	0.29100E-03	239832.9	4837809.6	446.8	2.72	4.65	2.53	NO	MONTH
AELRF05	0	0.29100E-03	239832.3	4837799.6	446.8	2.72	4.65	2.53	NO	MONTH
AELRF06	0	0.29100E-03	239831.7	4837789.6	446.6	2.72	4.65	2.53	NO	MONTH
AELRF07	0	0.29100E-03	239831.0	4837779.6	446.4	2.72	4.65	2.53	NO	MONTH
AELRF08	0	0.29100E-03	239830.5	4837771.0	446.2	2.72	4.65	2.53	NO	MONTH
AELRG01	0	0.15800E-03	239828.5	4837741.0	445.9	2.72	4.65	2.53	NO	MONTH
AELRG02	0	0.15800E-03	239828.4	4837731.0	445.8	2.72	4.65	2.53	NO	MONTH
AELRG03	0	0.15800E-03	239828.2	4837721.0	445.7	2.72	4.65	2.53	NO	MONTH
AELRG04	0	0.15800E-03	239837.2	4837719.4	445.7	2.72	4.65	2.53	NO	MONTH
AELRG05	0	0.15800E-03	239847.2	4837718.7	445.7	2.72	4.65	2.53	NO	MONTH
AELRG06	0	0.15800E-03	239857.2	4837718.0	445.8	2.72	4.65	2.53	NO	MONTH
AELRH01	0	0.60000E-04	239870.1	4837835.5	446.9	2.42	4.65	2.25	NO	MONTH
AELRH02	0	0.60000E-04	239869.1	4837825.5	446.8	2.42	4.65	2.25	NO	MONTH
AELRH03	0	0.60000E-04	239868.1	4837815.6	446.8	2.42	4.65	2.25	NO	MONTH
AELRH04	0	0.60000E-04	239867.2	4837805.6	446.7	2.42	4.65	2.25	NO	MONTH
AELRH05	0	0.60000E-04	239866.2	4837795.7	446.6	2.42	4.65	2.25	NO	MONTH
AELRH06	0	0.60000E-04	239865.3	4837785.7	446.5	2.42	4.65	2.25	NO	MONTH
AELRH07	0	0.60000E-04	239864.3	4837775.8	446.4	2.42	4.65	2.25	NO	MONTH
AELRH08	0	0.60000E-04	239863.3	4837765.8	446.3	2.42	4.65	2.25	NO	MONTH
AELRH09	0	0.60000E-04	239862.4	4837755.9	446.2	2.42	4.65	2.25	NO	MONTH
AELRH10	0	0.60000E-04	239861.4	4837745.9	446.1	2.42	4.65	2.25	NO	MONTH
AELRH11	0	0.60000E-04	239860.4	4837736.0	446.0	2.42	4.65	2.25	NO	MONTH
AELRH12	0	0.60000E-04	239859.5	4837726.0	445.9	2.42	4.65	2.25	NO	MONTH
AELRH13	0	0.60000E-04	239858.8	4837719.5	445.8	2.42	4.65	2.25	NO	MONTH
AELRI01	0	0.21800E-03	239859.4	4837717.0	445.8	2.65	4.65	2.47	NO	MONTH
AELRI02	0	0.21800E-03	239869.3	4837715.7	445.9	2.65	4.65	2.47	NO	MONTH
AELRI03	0	0.21800E-03	239879.2	4837714.4	446.0	2.65	4.65	2.47	NO	MONTH
AELRI04	0	0.21800E-03	239889.2	4837713.2	446.0	2.65	4.65	2.47	NO	MONTH
AELRK01	0	0.23900E-03	239899.1	4837711.9	446.0	2.55	4.65	2.37	NO	MONTH
AELRK02	0	0.23900E-03	239909.0	4837710.6	446.0	2.55	4.65	2.37	NO	MONTH
AELRK03	0	0.23900E-03	239918.9	4837709.3	446.0	2.55	4.65	2.37	NO	MONTH
AELRK04	0	0.23900E-03	239928.8	4837708.0	446.0	2.55	4.65	2.37	NO	MONTH
AELRK05	0	0.23900E-03	239938.8	4837707.0	446.0	2.55	4.65	2.37	NO	MONTH
AELRK06	0	0.23900E-03	239948.8	4837706.3	446.1	2.55	4.65	2.37	NO	MONTH
AELRK07	0	0.23900E-03	239958.7	4837705.5	446.2	2.55	4.65	2.37	NO	MONTH
AELRK08	0	0.23900E-03	239968.7	4837704.8	446.3	2.55	4.65	2.37	NO	MONTH
AELRK09	0	0.23900E-03	239978.7	4837704.0	446.3	2.55	4.65	2.37	NO	MONTH
AELRK10	0	0.23900E-03	239988.6	4837703.2	446.3	2.55	4.65	2.37	NO	MONTH
AELRJ01	0	0.21800E-03	240003.2	4837829.0	447.9	2.65	4.65	2.47	NO	MONTH
AELRJ02	0	0.21800E-03	240013.1	4837828.2	447.9	2.65	4.65	2.47	NO	MONTH

*** AERMOD - VERSION B10363 ***

*** GVL 24HR FP25 NAAQS w/BG (Day-by-Day PM2.5 BAM) (21FEB2011 DATA)

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**MODELOPTs: RegDFAULT CONC

ELEV

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
AELRJ03	0	0.21800E-03	240023.1	4837827.5	447.9	2.65	4.65	2.47	NO	MONTH
AELRJ04	0	0.21800E-03	240033.1	4837826.7	447.9	2.65	4.65	2.47	NO	MONTH
AELRJ05	0	0.21800E-03	240043.0	4837825.9	447.6	2.65	4.65	2.47	NO	MONTH
AELRJ06	0	0.21800E-03	240053.0	4837825.1	447.0	2.65	4.65	2.47	NO	MONTH
AELFS24A	0	0.31000E-02	239830.5	4837770.0	446.2	3.05	2.13	2.84	NO	
AELFS24B	0	0.31000E-02	239828.2	4837742.5	445.9	3.05	2.13	2.84	NO	
01100026	0	0.54300E+01	237797.6	4840863.5	472.0	10.00	20.00	10.00	NO	
10500051	0	0.54100E+01	257491.3	4858037.0	518.0	10.00	20.00	10.00	NO	
10500054	0	0.51400E-02	289353.0	4834470.0	479.0	10.00	20.00	10.00	NO	
11700015	0	0.26800E+01	233556.5	4875363.5	528.0	10.00	20.00	10.00	NO	
11700018	0	0.14200E+00	236063.2	4875374.0	534.4	10.00	20.00	10.00	NO	
11700023	0	0.54700E+00	244616.3	4886952.0	535.0	10.00	20.00	10.00	NO	
13300017	0	0.51700E+01	227518.1	4826756.5	453.0	10.00	20.00	10.00	NO	
13300018	0	0.54900E-01	240995.4	4839838.0	458.8	10.00	20.00	10.00	NO	
13300020	0	0.19400E-01	227518.1	4826756.5	453.0	10.00	20.00	10.00	NO	
SD000004	0	0.13200E+00	194373.0	4842723.0	484.2	20.00	20.00	10.00	NO	
SD000005	0	0.17600E-01	196043.0	4842135.0	475.7	10.00	20.00	10.00	NO	

*** AERMOD - VERSION B10363 ***

*** GVL 24HR FP25 NAAQS w/BG (Day-by-Day PM2.5 BAM) (21FEB2011 DATA)
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**MODELOPTs: RegDEFAULT CONC

ELEV

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs															
DRYER	AELSV015	,														
POINT	AELSV001	,	AELSV002	,	AELSV004	,	AELSV011	,	AELSV014	,	AELSV017	,				
DOORS	AELFS24A	,	AELFS24B	,												
COOLING	AELFS06A	,	AELFS06B	,	AELFS06C	,										
ROADS	AELRA01	,	AELRA02	,	AELRA03	,	AELRA04	,	AELRA05	,	AELRA06	,	AELRB01	,	AELRB02	,
	AELRB03	,	AELRB04	,	AELRB05	,	AELRB06	,	AELRB07	,	AELRB08	,	AELRB09	,	AELRB10	,
	AELRB11	,	AELRB12	,	AELRB13	,	AELRC01	,	AELRC02	,	AELRC03	,	AELRC04	,	AELRC05	,
	AELRC06	,	AELRC07	,	AELRD01	,	AELRD02	,	AELRD03	,	AELRD04	,	AELRD05	,	AELRD06	,
	AELRD07	,	AELRE01	,	AELRE02	,	AELRE03	,	AELRE04	,	AELRF01	,	AELRF02	,	AELRF03	,
	AELRF04	,	AELRF05	,	AELRF06	,	AELRF07	,	AELRF08	,	AELRG01	,	AELRG02	,	AELRG03	,
	AELRG04	,	AELRG05	,	AELRG06	,	AELRH01	,	AELRH02	,	AELRH03	,	AELRH04	,	AELRH05	,
	AELRH06	,	AELRH07	,	AELRH08	,	AELRH09	,	AELRH10	,	AELRH11	,	AELRH12	,	AELRH13	,
	AELRI01	,	AELRI02	,	AELRI03	,	AELRI04	,	AELRK01	,	AELRK02	,	AELRK03	,	AELRK04	,
	AELRK05	,	AELRK06	,	AELRK07	,	AELRK08	,	AELRK09	,	AELRK10	,	AELRJ01	,	AELRJ02	,
	AELRJ03	,	AELRJ04	,	AELRJ05	,	AELRJ06	,								
AEL	AELRA01	,	AELRA02	,	AELRA03	,	AELRA04	,	AELRA05	,	AELRA06	,	AELRB01	,	AELRB02	,
	AELRB03	,	AELRB04	,	AELRB05	,	AELRB06	,	AELRB07	,	AELRB08	,	AELRB09	,	AELRB10	,
	AELRB11	,	AELRB12	,	AELRB13	,	AELRC01	,	AELRC02	,	AELRC03	,	AELRC04	,	AELRC05	,
	AELRC06	,	AELRC07	,	AELRD01	,	AELRD02	,	AELRD03	,	AELRD04	,	AELRD05	,	AELRD06	,
	AELRD07	,	AELRE01	,	AELRE02	,	AELRE03	,	AELRE04	,	AELRF01	,	AELRF02	,	AELRF03	,

*** AERMOD - VERSION B10363 ***

*** GVL 24HR FP25 NAAQS w/BG (Day-by-Day PM2.5 BAM) (21FEB2011 DATA)
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**MODELOPTs: RegDEFAULT CONC

ELEV

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs												
	AELRF04	, AELRF05	, AELRF06	, AELRF07	, AELRF08	, AELRG01	, AELRG02	, AELRG03	, AELRH04	, AELRH05	, AELRH06	, AELRH07	, AELRH08
	AELRG04	, AELRG05	, AELRG06	, AELRH01	, AELRH02	, AELRH03	, AELRH04	, AELRH05	, AELRH06	, AELRH07	, AELRH08	, AELRH09	, AELRH10
	AELRH06	, AELRH07	, AELRH08	, AELRH09	, AELRH10	, AELRH11	, AELRH12	, AELRH13	, AELRK01	, AELRK02	, AELRK03	, AELRK04	, AELRK05
	AELRI01	, AELRI02	, AELRI03	, AELRI04	, AELRK01	, AELRK02	, AELRK03	, AELRK04	, AELRK05	, AELRK06	, AELRK07	, AELRK08	, AELRK09
	AELRK05	, AELRK06	, AELRK07	, AELRK08	, AELRK09	, AELRK10	, AELRJ01	, AELRJ02	, AELRJ03	, AELRJ04	, AELRJ05	, AELRJ06	, AELFS24A
	AELRJ03	, AELRJ04	, AELRJ05	, AELRJ06	, AELFS24A	, AELFS24B	, AELSV001	, AELSV002	, AELSV003	, AELSV004	, AELSV005	, AELSV006	, AELSV007
	AELSV004	, AELSV011	, AELSV014	, AELSV017	, AELFS06A	, AELFS06B	, AELSV015	, AELFS06C	, AELSV016	, AELSV017	, AELSV018	, AELSV019	, AELSV020
FAR_SRCS	01100026	, 10500051	, 10500054	, 11700015	, 11700018	, 11700023	, 13300017	, 13300018	, 13300019	, 13300020	, 13300021	, 13300022	, 13300023
	13300020	, SD000004	, SD000005										
BACKGRND	BACKGROUND												
ALL	AELRA01	, AELRA02	, AELRA03	, AELRA04	, AELRA05	, AELRA06	, AELRB01	, AELRB02	, AELRB03	, AELRB04	, AELRB05	, AELRB06	, AELRB07
	AELRB03	, AELRB04	, AELRB05	, AELRB06	, AELRB07	, AELRB08	, AELRB09	, AELRB10	, AELRB11	, AELRB12	, AELRB13	, AELRC01	, AELRC02
	AELRB11	, AELRB12	, AELRB13	, AELRC01	, AELRC02	, AELRC03	, AELRC04	, AELRC05	, AELRC06	, AELRC07	, AELRD01	, AELRD02	, AELRD03
	AELRC06	, AELRC07	, AELRD01	, AELRD02	, AELRD03	, AELRD04	, AELRD05	, AELRD06	, AELRD07	, AELRE01	, AELRE02	, AELRE03	, AELRE04
	AELRD07	, AELRE01	, AELRE02	, AELRE03	, AELRE04	, AELRF01	, AELRF02	, AELRF03	, AELRF04	, AELRF05	, AELRF06	, AELRF07	, AELRF08
	AELRF04	, AELRF05	, AELRF06	, AELRF07	, AELRF08	, AELRG01	, AELRG02	, AELRG03	, AELRG04	, AELRG05	, AELRG06	, AELRH01	, AELRH02
	AELRG04	, AELRG05	, AELRG06	, AELRH01	, AELRH02	, AELRH03	, AELRH04	, AELRH05	, AELRH06	, AELRH07	, AELRH08	, AELRH09	, AELRH10
	AELRH06	, AELRH07	, AELRH08	, AELRH09	, AELRH10	, AELRH11	, AELRH12	, AELRH13	, AELRI01	, AELRI02	, AELRI03	, AELRI04	, AELRK01
	AELRI01	, AELRI02	, AELRI03	, AELRI04	, AELRK01	, AELRK02	, AELRK03	, AELRK04	, AELRK05	, AELRK06	, AELRK07	, AELRK08	, AELRK09
	AELRK05	, AELRK06	, AELRK07	, AELRK08	, AELRK09	, AELRK10	, AELRJ01	, AELRJ02					

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ELEV

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID

SOURCE IDs

AELRJ03	, AELRJ04	, AELRJ05	, AELRJ06	, AELFS24A	, AELFS24B	, 01100026	, 10500051	,
10500054	, 11700015	, 11700018	, 11700023	, 13300017	, 13300018	, 13300020	, SD000004	,
SD000005	, AELSV001	, AELSV002	, AELSV004	, AELSV011	, AELSV014	, AELSV017	, AELFS06A	,
AELFS06B	, AELSV015	, AELFS06C	, BACKGROUND					,

*** AERMOD - VERSION B10363 ***

*** GVL 24HR FP25 NAAQS w/BG (Day-by-Day PM2.5 BAM) (21FEB2011 DATA)

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ELEV

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

THIS & MOST OTHER ITEMS NOT PRINTED TO SAVE SPACE

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *
LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE ID	-- RECEPTOR LOCATION --		DISTANCE (METERS)
	XR (METERS)	YR (METERS)	
--- --	---	---	---
AELRA01	240051.3	4837692.1	-3.73
AELRA01	240051.8	4837701.9	-5.30
AELRJ06	240057.7	4837819.9	-2.98
AELRJ06	240058.2	4837829.8	-3.01

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*** GVL 24HR FP25 NAAQS w/BG (Day-by-Day PM2.5 BAM) (21FEB2011 DATA)

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**MODELOPTs: RegDEFAULT CONC

ELEV

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1			

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

**MODELOPTs: RegDEFAULT CONC

ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Met Version: 06341

Surface file: MJQMPX5Y0408.SFC
 Profile file: MJQMPX5Y0408.PFL
 Surface format: FREE
 Profile format: FREE
 Surface station no.: 99999

Upper air station no.: 94983
 Name: MPX
 Year: 2004

Name: KMJQ_JACKSON_MN
 Year: 2004

First 24 hours of scalar data

YR	MO	DY	JDY	HR	HO	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT
04	01	01	1	01	-39.9	0.335	-9.000	-9.000	-999.	447.	85.4	0.02	0.49	1.00	5.70	161.	10.0	268.1	2.0			
04	01	01	1	02	-32.2	0.270	-9.000	-9.000	-999.	325.	55.5	0.01	0.49	1.00	5.10	138.	10.0	268.1	2.0			
04	01	01	1	03	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	144.	10.0	268.1	2.0			
04	01	01	1	04	-27.9	0.235	-9.000	-9.000	-999.	267.	41.8	0.01	0.49	1.00	4.60	143.	10.0	268.1	2.0			
04	01	01	1	05	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	143.	10.0	268.1	2.0			
04	01	01	1	06	-41.0	0.344	-9.000	-9.000	-999.	465.	90.1	0.01	0.49	1.00	6.20	142.	10.0	268.1	2.0			
04	01	01	1	07	-48.2	0.405	-9.000	-9.000	-999.	593.	124.6	0.02	0.49	1.00	6.70	155.	10.0	268.1	2.0			
04	01	01	1	08	-27.9	0.235	-9.000	-9.000	-999.	281.	41.8	0.01	0.49	1.00	4.60	143.	10.0	268.1	2.0			
04	01	01	1	09	-26.6	0.238	-9.000	-9.000	-999.	267.	45.7	0.01	0.49	0.83	4.60	147.	10.0	268.1	2.0			
04	01	01	1	10	-21.8	0.351	-9.000	-9.000	-999.	479.	179.2	0.02	0.49	0.69	5.70	161.	10.0	271.1	2.0			
04	01	01	1	11	1.1	0.326	0.041	0.009	2.	429.	-2960.5	0.02	0.49	0.64	5.10	184.	10.0	273.1	2.0			
04	01	01	1	12	8.6	0.368	0.173	0.008	22.	513.	-524.9	0.02	0.49	0.62	5.70	196.	10.0	274.1	2.0			
04	01	01	1	13	10.7	0.400	0.239	0.007	46.	582.	-540.5	0.02	0.49	0.62	6.20	203.	10.0	274.1	2.0			
04	01	01	1	14	7.4	0.367	0.235	0.008	63.	513.	-602.8	0.02	0.49	0.63	5.70	209.	10.0	275.1	2.0			
04	01	01	1	15	-2.1	0.309	-9.000	-9.000	-999.	396.	1248.1	0.01	0.49	0.65	5.10	222.	10.0	276.1	2.0			
04	01	01	1	16	-16.3	0.222	-9.000	-9.000	-999.	243.	60.2	0.01	0.49	0.71	4.10	214.	10.0	276.1	2.0			
04	01	01	1	17	-7.3	0.079	-9.000	-9.000	-999.	69.	6.1	0.01	0.49	0.88	2.60	231.	10.0	274.1	2.0			
04	01	01	1	18	-10.5	0.094	-9.000	-9.000	-999.	67.	7.2	0.01	0.49	1.00	3.10	217.	10.0	273.1	2.0			
04	01	01	1	19	-6.8	0.075	-9.000	-9.000	-999.	48.	5.6	0.01	0.49	1.00	2.60	254.	10.0	273.1	2.0			
04	01	01	1	20	-21.9	0.188	-9.000	-9.000	-999.	187.	27.2	0.01	0.49	1.00	4.10	267.	10.0	273.1	2.0			
04	01	01	1	21	-26.7	0.229	-9.000	-9.000	-999.	251.	40.4	0.01	0.49	1.00	4.60	290.	10.0	273.1	2.0			
04	01	01	1	22	-2.3	0.044	-9.000	-9.000	-999.	86.	3.3	0.01	0.49	1.00	1.50	282.	10.0	272.1	2.0			
04	01	01	1	23	-25.0	0.213	-9.000	-9.000	-999.	226.	34.8	0.02	0.49	1.00	4.10	200.	10.0	271.1	2.0			
04	01	01	1	24	-11.3	0.099	-9.000	-9.000	-999.	78.	7.7	0.02	0.49	1.00	3.10	200.	10.0	271.1	2.0			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
04	01	01	01	10.0	1	161.	5.70	268.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

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*** AERMOD - VERSION 09292 *** *** Agri-Energy LLC - PM10 24 hour and Annual *** 02/22/11
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM *** 11:42:14

**This Run Includes: 107 Source(s); 13 Source Group(s); and 644 Receptor(s)

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

GROUP ID			AVERAGE CONC	(YMMDDHH)	RECEPTOR	(XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH	6TH HIGH VALUE IS	95.63878c	ON 05102724: AT (	239822.20, 4837887.60,	447.43, 447.43,	0.00)	DC
DRYER	HIGH	6TH HIGH VALUE IS	47.64732	ON 04110324: AT (	239813.10, 4837883.50,	447.42, 447.42,	0.00)	DC
POINT	HIGH	6TH HIGH VALUE IS	12.84096m	ON 04091824: AT (	239786.00, 4837871.40,	447.49, 447.49,	0.00)	DC
DOORS	HIGH	6TH HIGH VALUE IS	51.24284m	ON 08082024: AT (	239786.00, 4837871.40,	447.49, 447.49,	0.00)	DC
COOLING	HIGH	6TH HIGH VALUE IS	3.81697c	ON 07091524: AT (	239900.00, 4837950.00,	447.45, 447.45,	0.00)	DC
ROADS	HIGH	6TH HIGH VALUE IS	49.82710c	ON 07041424: AT (	240051.80, 4837701.90,	446.78, 446.78,	0.00)	DC
AEL	HIGH	6TH HIGH VALUE IS	95.43967c	ON 05102724: AT (	239822.20, 4837887.60,	447.43, 447.43,	0.00)	DC
AELSV001	HIGH	6TH HIGH VALUE IS	4.30540	ON 05070924: AT (	239795.00, 4837875.40,	447.47, 447.47,	0.00)	DC
AELSV002	HIGH	6TH HIGH VALUE IS	5.25552c	ON 06090624: AT (	240054.20, 4837751.10,	446.84, 446.84,	0.00)	DC
AELSV004	HIGH	6TH HIGH VALUE IS	0.57833c	ON 07072924: AT (	239450.00, 4837800.00,	453.74, 453.74,	0.00)	DC
AELSV011	HIGH	6TH HIGH VALUE IS	2.52221	ON 07050524: AT (	239786.00, 4837871.40,	447.49, 447.49,	0.00)	DC
AELSV014	HIGH	6TH HIGH VALUE IS	7.36011m	ON 07062424: AT (	239786.00, 4837871.40,	447.49, 447.49,	0.00)	DC
AELSV017	HIGH	6TH HIGH VALUE IS	2.68620	ON 06050424: AT (240051.80, 4837701.90,	446.78, 446.78,	0.00)	DC

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*** AERMOD - VERSION 09292 *** *** Agri-Energy LLC - PM10 24 hour and Annual *** 02/21/11
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM *** 17:15:25

**This Run Includes: 107 Source(s); 13 Source Group(s); and 644 Receptor(s)

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	16.40634	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
DRYER	4.01902	AT (239813.10, 4837883.50, 447.42, 447.42, 0.00)	DC	
POINT	2.16256	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
DOORS	5.61315	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
COOLING	0.44325	AT (239900.00, 4838000.00, 447.70, 447.70, 0.00)	DC	
ROADS	9.90233	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AEL	15.25166	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
AELSV001	0.74175	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV002	0.52796	AT (240048.30, 4837633.00, 446.15, 446.15, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV004	0.05558	AT (240350.00, 4837400.00, 446.33, 446.33, 0.00)	DC	
AELSV011	0.27192	AT (239996.30, 4837545.90, 444.78, 444.78, 0.00)	DC	
AELSV014	0.93378	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV017	0.33794	AT (240051.80, 4837701.90, 446.78, 446.78, 0.00)	DC	

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*** AERMOD - VERSION 09292 *** *** Agri-Energy LLC - PM10 24 hour and Annual *** 02/21/11
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM *** 17:33:47

**This Run Includes: 107 Source(s); 13 Source Group(s); and 644 Receptor(s)

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	16.58974	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	
DRYER	3.27973	AT (239813.10, 4837883.50, 447.42, 447.42, 0.00)	DC	
POINT	2.41676	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
DOORS	5.80445	AT (239804.10, 4837879.50, 447.44, 447.44, 0.00)	DC	
COOLING	0.47318	AT (239900.00, 4838000.00, 447.70, 447.70, 0.00)	DC	
ROADS	10.60764	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AEL	15.41826	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	
AELSV001	0.78044	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV002	0.59977	AT (240054.20, 4837751.10, 446.84, 446.84, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV004	0.05224	AT (239800.00, 4838250.00, 455.05, 455.05, 0.00)	DC	
AELSV011	0.26114	AT (240048.80, 4837642.90, 446.26, 446.26, 0.00)	DC	
AELSV014	1.06265	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV017	0.36709	AT (240051.80, 4837701.90, 446.78, 446.78, 0.00)	DC	

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*** AERMOD - VERSION 09292 *** *** Agri-Energy LLC - PM10 24 hour and Annual *** 02/21/11
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM *** 17:52:01

**This Run Includes: 107 Source(s); 13 Source Group(s); and 644 Receptor(s)

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	17.00056	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	
DRYER	2.75102	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
POINT	2.12336	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
DOORS	4.48679	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
COOLING	0.36174	AT (239900.00, 4838000.00, 447.70, 447.70, 0.00)	DC	
ROADS	10.80042	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AEL	15.53761	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	
AELSV001	0.63418	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV002	0.66366	AT (240048.30, 4837633.00, 446.15, 446.15, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV004	0.06107	AT (240350.00, 4837400.00, 446.33, 446.33, 0.00)	DC	
AELSV011	0.31603	AT (240048.80, 4837642.90, 446.26, 446.26, 0.00)	DC	
AELSV014	0.94004	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV017	0.40384	AT (240051.80, 4837701.90, 446.78, 446.78, 0.00)	DC	

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*** AERMOD - VERSION 09292 *** *** Agri-Energy LLC - PM10 24 hour and Annual *** 02/21/11
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM *** 18:10:30

**This Run Includes: 107 Source(s); 13 Source Group(s); and 644 Receptor(s)

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	15.80234	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
DRYER	3.51571	AT (239813.10, 4837883.50, 447.42, 447.42, 0.00)	DC	
POINT	2.39049	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
DOORS	5.31336	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
COOLING	0.45002	AT (239900.00, 4838000.00, 447.70, 447.70, 0.00)	DC	
ROADS	9.87584	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AEL	14.56909	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
AELSV001	0.74320	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV002	0.63296	AT (240049.30, 4837652.70, 446.36, 446.36, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV004	0.06011	AT (240350.00, 4837450.00, 446.85, 446.85, 0.00)	DC	
AELSV011	0.24541	AT (240048.80, 4837642.90, 446.26, 446.26, 0.00)	DC	
AELSV014	1.04791	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV017	0.41251	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

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*** AERMOD - VERSION 09292 *** *** Agri-Energy LLC - PM10 24 hour and Annual *** 02/21/11
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM *** 16:57:24

**This Run Includes: 107 Source(s); 13 Source Group(s); and 644 Receptor(s)

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	17.59044	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	
DRYER	3.41392	AT (239813.10, 4837883.50, 447.42, 447.42, 0.00)	DC	
POINT	2.40845	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
DOORS	6.05839	AT (239804.10, 4837879.50, 447.44, 447.44, 0.00)	DC	
COOLING	0.41292	AT (239900.00, 4838000.00, 447.70, 447.70, 0.00)	DC	
ROADS	11.32060	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AEL	16.27874	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	
AELSV001	0.76241	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV002	0.63332	AT (240048.80, 4837642.90, 446.26, 446.26, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV004	0.07134	AT (240350.00, 4837400.00, 446.33, 446.33, 0.00)	DC	
AELSV011	0.28482	AT (240048.80, 4837642.90, 446.26, 446.26, 0.00)	DC	
AELSV014	1.04728	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV017	0.40075	AT (240051.80, 4837701.90, 446.78, 446.78, 0.00)	DC	

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*** AERMOD - VERSION 09292 *** *** Agri-Energy LLC - PM2.5 24 hour and Annual *** 02/27/11
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM *** 13:06:40

**This Run Includes: 107 Source(s); 13 Source Group(s); and 644 Receptor(s)

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS 3.90332	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
DRYER	1ST HIGHEST VALUE IS 0.68710	AT (239813.10, 4837883.50, 447.42, 447.42, 0.00)	DC	
POINT	1ST HIGHEST VALUE IS 1.44903	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
DOORS	1ST HIGHEST VALUE IS 0.43393	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
COOLING	1ST HIGHEST VALUE IS 0.44325	AT (239900.00, 4838000.00, 447.70, 447.70, 0.00)	DC	
ROADS	1ST HIGHEST VALUE IS 0.55914	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AEL	1ST HIGHEST VALUE IS 2.73827	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV001	1ST HIGHEST VALUE IS 0.74175	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV002	1ST HIGHEST VALUE IS 0.52796	AT (240048.30, 4837633.00, 446.15, 446.15, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV004	1ST HIGHEST VALUE IS 0.05558	AT (240350.00, 4837400.00, 446.33, 446.33, 0.00)	DC	
AELSV011	1ST HIGHEST VALUE IS 0.27192	AT (239996.30, 4837545.90, 444.78, 444.78, 0.00)	DC	
AELSV014	1ST HIGHEST VALUE IS 0.13868	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV017	1ST HIGHEST VALUE IS 0.33794	AT (240051.80, 4837701.90, 446.78, 446.78, 0.00)	DC	

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*** AERMOD - VERSION 09292 *** *** Agri-Energy LLC - PM2.5 24 hour and Annual *** 02/27/11
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM *** 13:36:24

**This Run Includes: 107 Source(s); 13 Source Group(s); and 644 Receptor(s)

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS 4.12309	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
DRYER	1ST HIGHEST VALUE IS 0.56071	AT (239813.10, 4837883.50, 447.42, 447.42, 0.00)	DC	
POINT	1ST HIGHEST VALUE IS 1.59811	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
DOORS	1ST HIGHEST VALUE IS 0.44872	AT (239804.10, 4837879.50, 447.44, 447.44, 0.00)	DC	
COOLING	1ST HIGHEST VALUE IS 0.47318	AT (239900.00, 4838000.00, 447.70, 447.70, 0.00)	DC	
ROADS	1ST HIGHEST VALUE IS 0.60163	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AEL	1ST HIGHEST VALUE IS 2.83729	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV001	1ST HIGHEST VALUE IS 0.78044	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV002	1ST HIGHEST VALUE IS 0.59977	AT (240054.20, 4837751.10, 446.84, 446.84, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV004	1ST HIGHEST VALUE IS 0.05224	AT (239800.00, 4838250.00, 455.05, 455.05, 0.00)	DC	
AELSV011	1ST HIGHEST VALUE IS 0.26114	AT (240048.80, 4837642.90, 446.26, 446.26, 0.00)	DC	
AELSV014	1ST HIGHEST VALUE IS 0.15782	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV017	1ST HIGHEST VALUE IS 0.36709	AT (240051.80, 4837701.90, 446.78, 446.78, 0.00)	DC	

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*** AERMOD - VERSION 09292 *** *** Agri-Energy LLC - PM2.5 24 hour and Annual *** 02/27/11
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM *** 14:05:52

**This Run Includes: 107 Source(s); 13 Source Group(s); and 644 Receptor(s)

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS 3.87695	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
DRYER	1ST HIGHEST VALUE IS 0.47032	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
POINT	1ST HIGHEST VALUE IS 1.47016	AT (240048.30, 4837633.00, 446.15, 446.15, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
DOORS	1ST HIGHEST VALUE IS 0.34686	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
COOLING	1ST HIGHEST VALUE IS 0.36174	AT (239900.00, 4838000.00, 447.70, 447.70, 0.00)	DC	
ROADS	1ST HIGHEST VALUE IS 0.61092	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AEL	1ST HIGHEST VALUE IS 2.41833	AT (240050.80, 4837682.20, 446.65, 446.65, 0.00)	DC	
AELSV001	1ST HIGHEST VALUE IS 0.63418	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV002	1ST HIGHEST VALUE IS 0.66366	AT (240048.30, 4837633.00, 446.15, 446.15, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV004	1ST HIGHEST VALUE IS 0.06107	AT (240350.00, 4837400.00, 446.33, 446.33, 0.00)	DC	
AELSV011	1ST HIGHEST VALUE IS 0.31603	AT (240048.80, 4837642.90, 446.26, 446.26, 0.00)	DC	
AELSV014	1ST HIGHEST VALUE IS 0.13961	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV017	1ST HIGHEST VALUE IS 0.40384	AT (240051.80, 4837701.90, 446.78, 446.78, 0.00)	DC	

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*** AERMOD - VERSION 09292 *** *** Agri-Energy LLC - PM2.5 24 hour and Annual *** 02/27/11
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM *** 14:35:41

**This Run Includes: 107 Source(s); 13 Source Group(s); and 644 Receptor(s)

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS 3.99025	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
DRYER	1ST HIGHEST VALUE IS 0.60105	AT (239813.10, 4837883.50, 447.42, 447.42, 0.00)	DC	
POINT	1ST HIGHEST VALUE IS 1.57499	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
DOORS	1ST HIGHEST VALUE IS 0.41076	AT (239822.20, 4837887.60, 447.43, 447.43, 0.00)	DC	
COOLING	1ST HIGHEST VALUE IS 0.45002	AT (239900.00, 4838000.00, 447.70, 447.70, 0.00)	DC	
ROADS	1ST HIGHEST VALUE IS 0.55794	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AEL	1ST HIGHEST VALUE IS 2.73604	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV001	1ST HIGHEST VALUE IS 0.74320	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV002	1ST HIGHEST VALUE IS 0.63296	AT (240049.30, 4837652.70, 446.36, 446.36, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV004	1ST HIGHEST VALUE IS 0.06011	AT (240350.00, 4837450.00, 446.85, 446.85, 0.00)	DC	
AELSV011	1ST HIGHEST VALUE IS 0.24541	AT (240048.80, 4837642.90, 446.26, 446.26, 0.00)	DC	
AELSV014	1ST HIGHEST VALUE IS 0.15563	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV017	1ST HIGHEST VALUE IS 0.41251	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

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*** AERMOD - VERSION 09292 *** *** Agri-Energy LLC - PM2.5 24 hour and Annual *** 02/27/11
*** Grain Dryer Limited to 1200bu/hr Sept through Feb also limited 5AM *** 15:05:34

**This Run Includes: 107 Source(s); 13 Source Group(s); and 644 Receptor(s)

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS 4.31344	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
DRYER	1ST HIGHEST VALUE IS 0.58365	AT (239813.10, 4837883.50, 447.42, 447.42, 0.00)	DC	
POINT	1ST HIGHEST VALUE IS 1.59376	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
DOORS	1ST HIGHEST VALUE IS 0.46835	AT (239804.10, 4837879.50, 447.44, 447.44, 0.00)	DC	
COOLING	1ST HIGHEST VALUE IS 0.41292	AT (239900.00, 4838000.00, 447.70, 447.70, 0.00)	DC	
ROADS	1ST HIGHEST VALUE IS 0.63934	AT (240052.30, 4837711.70, 446.81, 446.81, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AEL	1ST HIGHEST VALUE IS 2.82139	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV001	1ST HIGHEST VALUE IS 0.76241	AT (239795.00, 4837875.40, 447.47, 447.47, 0.00)	DC	
AELSV002	1ST HIGHEST VALUE IS 0.63332	AT (240048.80, 4837642.90, 446.26, 446.26, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV004	1ST HIGHEST VALUE IS 0.07134	AT (240350.00, 4837400.00, 446.33, 446.33, 0.00)	DC	
AELSV011	1ST HIGHEST VALUE IS 0.28482	AT (240048.80, 4837642.90, 446.26, 446.26, 0.00)	DC	
AELSV014	1ST HIGHEST VALUE IS 0.15554	AT (239786.00, 4837871.40, 447.49, 447.49, 0.00)	DC	

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
AELSV017	1ST HIGHEST VALUE IS 0.40075	AT (240051.80, 4837701.90, 446.78, 446.78, 0.00)	DC	

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 13300023-009

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

1. General Information

1.1 Applicant and Stationary Source Location:

Table 1. Applicant and Source Address

Applicant/Address	Stationary Source/Address SIC Code: 2869
Gevo 345 Inverness Drive South Building C, Suite 310 Englewood, Colorado 80112	Agri-Energy LLC 502 Walnut Ave S Luverne Rock County
Contact: Glenn Johnston Phone: 303-858-8358	

1.2 Facility Description

Gevo / Agri-Energy, LLC currently produces fuel ethanol and Distiller's Dried Grain and Solubles (DDGS) from corn. Pollutants emitted include volatile organic compounds (VOC), particulate matter (PM), particulate matter smaller than 10 microns (PM₁₀), particulate matter smaller than 2.5 microns (PM_{2.5}), nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), and hazardous air pollutants (HAP). Greenhouse gases (GHG, primarily carbon dioxide), are also emitted. Sources of emissions from the facility include grain receiving and handling; fermentation; distillation; DDGS production, storage and handling; coal and propane combustion; product and denaturant storage and loadout; and leaks from piping connections.

As of January 2, 2010, the United States Environmental Protection Agency (USEPA) began regulating Greenhouse Gases (GHGs) in terms of carbon dioxide equivalents, or CO₂e. As implied by the name, the pollutant Greenhouse Gases is not a single chemical, but a combination of many chemicals. Some chemicals are attributed to have a larger effect on the environment than others; to reflect this, each of these chemicals has been assigned a certain weighting factor called a global warming potential. These global warming potentials are defined by the USEPA at 40 CFR pt. 98, Appendix A, Table 1. A source's emissions of GHGs are quantified in two steps: first, the potential emissions of each of the chemicals in 40 CFR pt. 98, Appendix A, Table 1 are multiplied by their respective global warming potential; second, the result of each calculation in step 1 are summed together to arrive at a single numeric value in the units of CO₂e.

The facility employs a Thermal Oxidizer (RTO) to control VOC emissions from DDGS drying and other processes. Wet scrubbers control VOC emissions from the fermentation and distillation processes. The

facility employs baghouses to control particulate emissions. The large product storage tanks are equipped with internal floating roofs to control VOCs. The ethanol loadout rack for trucks and railcars is equipped with a flare to control VOCs. Emissions from equipment leaks are controlled through an inspection and maintenance program.

1.3 Description of the Activities Allowed by this Permit Action

DQ 3322, major amendment, requests modifications to the facility so that isobutanol can be produced as well as ethanol and other changes requested. Corn will continue to be the feedstock (other grains can also be used as is the case with ethanol production). The existing fermentation and distillation operations will also be used. Specific changes include:

FC, Total Facility requirements, added 90,000 ton per year CO₂e limit and associated recordkeeping; changed production limit to ethanol-equivalent to accommodate change-over from ethanol to isobutanol;

Added emission units EU037 to 044 and 046 through 049 (for isobutanol production) vented through fermentation scrubber(CE005, SV010) except EU044 which is vented through the distillation scrubber (CE005, SV010);

SV001, grain receiving, added PM_{2.5} limit of 0.37 lb/hr, height to be increased to 60 ft;

SV002, hammermilling, emission limits for PM, PM₁₀ increased from 0.17 lb/hr to 0.22 lb/hr due to increased ventilation air flow for replacement hammermill, added PM_{2.5} limit of 0.22 lb/hr;

SV003, fermentation scrubber exhaust – this is currently a discharge to atmosphere but will be routed to the thermal oxidizer inlet (CE007) and thus normally exhausted through SV004; SV003 will exhaust to atmosphere when CE007 is not operating;

SV004, thermal oxidizer, PM and PM₁₀ limits changed from 3.0 to 5.0 lb/hr; added PM_{2.5} limit of 5.0 lb/hr; added emission units vented through scrubbers; changed DDGS throughput records to be based on corn processed;

SV010, distillation scrubber exhaust – this is currently a discharge to atmosphere but will be routed to the thermal oxidizer inlet (CE007) and thus normally exhausted through SV004; SV010 will exhaust to atmosphere when CE007 is not operating;

SV014, cooling cyclone, PM and PM₁₀ limits changed from 4.0 to 0.80 lb/hr; added PM_{2.5} limit of 0.12 lb/hr;

FS001, Truck delivery of grain – number of straight trucks per day increased to 30;

EU029, Grain dryer, operating hours changed;

EU015, DDGS dryer burner rating corrected to 55 million Btu/hr from 60; throughput records changed to be based on corn processed;

Liquid storage tanks – those that previously stored ethanol can be used for isobutanol.

DQ 3074, reopening: setting VOC test frequency for the fermentation scrubber (CE003, SV003), to every 60 months; not included since SV003 will be normally routed to CE007 and SV004 rather than emit directly to the atmosphere.

DQ 3118, major amendment: requested the change to the thermal oxidizer limits and straight truck limits described above; those changes are rolled into this permit action.

DQ3451, major amendment for replacement of hammermill.

Other changes

Deleted PM2.5 modeling requirement included in permit 008 – completed (revised modeling for PM10 and PM2.5 has been submitted with the permit application for this permit action).

Control equipment: baghouses and scrubbers each have a separate page in the permit with control efficiencies corresponding to the associated stack emission limit (where uncontrolled emission factors are available); for the multiclone (GP004), the estimated control efficiency has been added to GP004

1.4. Facility Emissions:

Table 2. Title I Emissions Increase Summary

Pollutant	Unlimited Potential Emissions from the Modification (tpy)	Limited Potential Emissions from the Modification (tpy)*	PSD/112(g) Significant Thresholds for major sources (tpy)	NSR / 112(g) Review Required? (Yes/No)
PM	> 250	45.3	250	No
PM ₁₀	> 250	36.7	250	No
PM _{2.5}	> 250	31.1	250	No
NO _x	< 250	74.5	250	No
SO ₂	< 250	0.55	250	No
CO	> 250	79.2	250	No
Ozone (VOC)	> 250	82.9	250	No
CO ₂ e	209,000	90,000***	NA**	No
individual and total HAPs	> 10/25	5.0/10.2	10/25	No

*Since the facility is minor for PSD and Part 70 and remains minor after the changes, these numbers are the total facility limited PTE.

**Since this project is not subject to PSD for a pollutant other than CO₂e, CO₂e is not subject to PSD, provided construction commences by June 30, 2011. See discussion below for alternatives.

***Not including biogenic emissions from methanator, DDGS dryer gases routed to RTO, and distillation and fermentation scrubber gases routed to RTO

Table 3. Total Facility Potential to Emit Summary

Pollutant	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	HAP total	CO ₂ e
Total Facility PTE	45.3	36.7	31.1	0.55	74.5	82.9	79.2	10.22	90,000**
Change from previous permit (see sect. 3.1)	- 10.4	- 5.7	- 8.3	0	3.6	2.5	0	0	0
2009 Total Facility Actual Emissions	23.5	22.4	*	0.18	32.2	21.8	11.1	not reported in inventory	not reported in inventory

* PM_{2.5} is not currently reported but is expected to be less than or equal to PM₁₀

** Not including biogenic emissions from methanator, DDGS dryer gases routed to RTO, and distillation and fermentation scrubber gases routed to RTO

Table 4. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		PM, PM10, PM2.5, CO, VOC, CO ₂ e	SO ₂
Part 70 Permit Program		PM10, PM2.5, CO, VOC, CO ₂ e	SO ₂
Part 63 NESHAP		X	

2. Regulatory and/or Statutory Basis

Greenhouse Gases (GHG)

If construction commences by June 30, 2011:

This permit action is not subject to the federal Prevention of Significant Deterioration regulation for any pollutant other than GHG. Thus PSD does not apply to GHG (Phase I of the Tailoring Rule which covers the time from Jan. 2, 2011 to June 30, 2011), provided a continuous program of construction commences by June 30, 2011.

If construction commences on or after July 1 2011:

With no limits on the amount of fuel burned, this corn-based ethanol/isobutanol production facility would have a PTE for GHG of more than 100,000 tons per year. The Permittee has elected to have a limit on the source-wide PTE of 90,000 tons per year for GHG, as CO₂e. This PTE includes only nonbiogenic emissions from combustion of natural gas and propane. This PTE is also based on the expectation that US EPA's proposed change to the Tailoring Rule to defer biogenic emissions for three years will be promulgated by June 30, 2011 (see the Federal Register of March 21, 2011, starting on page 15249). Thus, the biogenic GHG emitted from fermentation and other processes are not included in the PTE of 90,000. With this limit, GHG are not subject to PSD.

If US EPA does not promulgate the changes to the Tailoring Rule to defer biogenic emissions by the time construction commences, and construction commences after June 30, 2011, the Permittee may avoid PSD for GHG by demonstrating that any increase in GHG that results from this project is less than 75,000 tons per year.

New Source Review, Prevention of Significant Deterioration

The facility is currently a nonmajor source under the federal NSR permit regulations. This permit action does not change the NSR status.

Part 70 Permit Program

The facility is currently a nonmajor source under the federal Part 70 permit regulation and Minn. R. ch. 7007.

New Source Performance Standards (NSPS)

No changes occur to NSPS applicability as a result of this permit action.

As before, the boilers (EU018 and EU033) are subject to Subpart Dc. The ethanol and denaturant storage tanks are subject to Subpart Kb. Pipe fittings and connections handling volatile organic liquids are subject to Subpart VV.

The new tanks for isobutanol (TK011 and TK012) are not subject to Kb since the vapor pressure of isobutanol is below the applicability threshold for Kb.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The Facility has accepted limits on VOC which effectively limit hazardous air pollutant (HAP) emissions such that it is a nonmajor source under 40 CFR pt. 63. The VOC limits are found at GP003, GP006, SV003, SV004, SV010, SV014, SV016, CE007, and FS005 and are expressed as limits in pounds per hour and limits on operational parameters of air pollution control equipment. Most HAPs emitted from ethanol production are VOC, so VOC limits can effectively limit HAPs. Test data from ethanol plants has confirmed that if there is at least 95 % VOC control on the fermentation process and the DDGS drying process, then HAP emissions will be below major source thresholds. Other emissions/controls taken into account include floating roofs on the liquid storage tanks and the Leak Detection and Repair program for piping leaks.

Thus, no NESHAPs, which apply only to major sources, apply to Gevo / Agri-Energy. The cooling tower is subject to the cooling tower NESHAP which prohibits use of chromium-containing chemicals to treat the cooling water.

US EPA has promulgated a NESHAP for area (nonmajor) sources of HAP which operate chemical manufacturing process units. This is Part 63, Subpart VVVVVV. Subpart VVVVVV applies if any HAP listed in the regulation is present in a process fluid above a specified level. The owner /operator has determined that this facility is not subject to VVVVVV since all HAPs regulated by VVVVVV are below the applicability threshold.

Compliance Assurance Monitoring (CAM)

This facility is not a major source under the federal Part 70 regulation; therefore, CAM does not apply at this time.

Environmental Review & AERA

The increase in allowable emissions as a result of this permit action is less than the EAW threshold of 250 tons per year; therefore an EAW is not required.

Minnesota State Rules

Portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.0610 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment (DDGS dryer EU015)
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment
- Minn. R. 7011.1000 Standards of Performance for Bulk Agricultural Commodity Facilities

Table 5. Regulatory Overview of Units Affected by the Modification/Permit Amendment

Level*	Applicable Regulations	Comments:
FC Total Facility	Title I Condition: to avoid classification as a major source	Added a condition related to GHG if EPA does not promulgate the deferral rule before construction commences which allows the Permittee to avoid PSD by demonstrating that the increase is less than 75,000 tons per year; Added a GHG limit of 90,000 tons per year to avoid PSD if construction does not commence until after July 1, 2011 (conditional on US EPA promulgating the deferral of biogenic GHG emissions); Added a Title I limit on production of isobutanol; Title I limit on production of ethanol remains unchanged; Also added limit that applies during any consecutive 12-months when both are produced
FC Total Facility	Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080	Updated remodeling requirements
GP002 Baghouse require- ments	Title I Conditions to avoid classification as a major source Minn. R. 7007.0800, subp. 4,	Baghouse O and M requirements moved to a separate page for each baghouse; control efficiency corresponds to stack emission limit where uncontrolled emission factors are available

Level*	Applicable Regulations	Comments:
	5 and 14	
GP003 Scrubber requirements	Title I Conditions to avoid classification as a major source Minn. R. 7007.0800, subp. 4, 5 and 14	Scrubber O and M requirements moved to a separate page for each scrubber
SV001	Title I Conditions to avoid classification as a major source	Correction: EU031 (corn storage bin) is vented through SV001; added limit for PM2.5
SV002	Title I Conditions to avoid classification as a major source	PM and PM10 limits changed for increased air flow for replacement hammermill; Added limit for PM2.5
SV003	Title I Conditions to avoid classification as a major source	EU037 through EU043 and EU046 through EU049 added to this control device and stack; no change in emission limits; in normal operation, gases from SV003 will be routed to the thermal oxidizer (CE007) and exhaust through SV004; SV003 will be used when CE007 in not operating
SV004	Title I Conditions to avoid classification as a major source	PM limit changed from 3.0 to 5.0 lb/hr PM10 limit changed from 3.0 to 5.0 lb/hr Added PM2.5 of 5.0 lb/hr All EUs venting through the scrubbers also vent through CE007 and SV004 when CE007 is operating
SV010	Title I Conditions to avoid classification as a major source	Added EU044; no change in emission limits; in normal operation, gases from SV010 will be routed to the thermal oxidizer (CE007) and exhaust through SV004; SV010 will be used when CE007 in not operating
SV014	Title I Conditions to avoid classification as a major source	PM limit changed from 4.0 lb/hr to 0.80 lb/hr PM10 limit changed from 4.0 lb/hr to 0.80 lb/hr Added PM2.5 limit of 0.12 lb/hr
EU029	Title I Conditions to avoid classification as a major source	Operating hours changed
FS001	Minn. R. ch. 7009	Daily straight truck limit increased to 30 per day; road cleaning added
Tanks	Minn. R. 7007.0800	All tanks previously allowed to store ethanol may also store isobutanol

*Where the requirement appears in the permit (e.g., EU, SV, GP, etc.).

The language 'This is a state-only requirement and is not enforceable by the U.S. Environmental Protection Agency (EPA) Administrator and citizens under the Clean Air Act' refers to permit requirements that are mandated by state law rather than by the federal Clean Air Act. The language is to clarify the distinction between permit conditions that are required by federal law and those that are required by state law. State law requirements are not enforceable by the EPA or by citizens under the federal Clean Air Act, but are fully enforceable by the MPCA and citizens under provisions of state law

3. Technical Information

3.1 Calculations of Potential to Emit and Emissions Changes

The physical and operational changes necessary to produce isobutanol result in emission increases due to additional piping for which leak detection and repair applies. Since a denaturant such as gasoline is not needed with isobutanol, and isobutanol has a lower vapor pressure than ethanol, there will be a decrease in VOC from existing storage tanks. However, since the permit still allows production of ethanol, the PTE remains that for ethanol production. The original hammermill (part of EU008, venting through CE002 and SV002) has also been replaced.

Changes to emission limits or factors used to estimate emissions since permit action 008 have occurred for the following subject items in the permit:

SV002: PM and PM10 limits changed from 0.17 to 0.22 lb/hr

SV004: PM and PM10 limits changed from 3.0 to 5.0 lb/hr

SV014: PM and PM10 limits changed from 4.0 to 0.8 lb/hr

EU029: Changes to allowed hours of operation

FS001: Straight truck limit increased from 20 to 30 per day

FS002: Emission calculations updated for grain handling fugitive emissions

FS004: Emission calculations updated for DDGS handling fugitive emissions

FS005: updated for increased number of pipe fittings

FS006: updated for addition of cooling tower cell and increased water flowrate

Detailed emission calculations for both this permit action (009) and the previous action (008) are available.

3.2 Air Quality Impact Analysis

Gevo / Agri-Energy has submitted modeling for PM10 and PM2.5 for this permit action which demonstrates compliance with the Minnesota and federal ambient air standards. The results are summarized in Table 6.

Table 6. NAAQS and MAAQS Modeling Summary

(Micrograms per cubic meter)

	Agri-Energy plus other modeled sources (no tailpipe emissions)	Background (unmodeled sources)	Total	NAAQS and MAAQS
PM10 24-hr	95.6	26	121.6	150
PM10 annual	18.0	12	30	(50)*
PM2.5 24-hr	33.4 includes background	(24.1)	33.4	35
PM2.5 annual	4.3	9.4	13.7	15.0

*US EPA has repealed the federal annual standard for PM10. Minnesota maintains this annual standard in State Rules.

3.3 Periodic Monitoring

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

In evaluating the monitoring included in the permit, the MPCA considers the following:

- The likelihood of violating the applicable requirements;
- Whether add-on controls are necessary to meet the emission limits;
- The variability of emissions over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic feasibility of possible periodic monitoring methods; and
- The kind of monitoring found on similar units elsewhere.

The table below summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

Table 7. Periodic Monitoring

Level*	Requirement (rule basis)	Additional Monitoring	Discussion
FC	Title I Condition production \leq 26 million gallons per year ethanol-equivalent as 12-month rolling sum	Daily record of ethanol and isobutanol production, monthly record, and record of calculated 12-month rolling sum	Ethanol and Isobutanol production limit to limit VOC and HAP; isobutanol production is multiplied by the ratio 26/22; 1 gallon ethanol equals 1 gallon ethanol-equivalent; 1 gallon isobutanol equals 26/22 gallon ethanol-equivalent; in any 12 months when 22 million gallons of isobutanol is produced, this will equal 26 million gallons of ethanol-equivalent
FC	Title I Condition CO ₂ e \leq 90,000 tons per year (not including biogenic emissions)	Daily record of natural gas and propane used; monthly total and calculation and record of CO ₂ e emitted	Added a GHG limit of 90,000 tons per year CO ₂ e to avoid PSD if construction does not commence by June 30, 2011 (conditional on US EPA promulgating the deferral of biogenic GHG emissions)
SV002 Hammermill baghouse	Title I Condition PM \leq 0.22 lbs/hr PM ₁₀ \leq 0.22 lbs/hr PM _{2.5} \leq 0.22 lbs/hr	No changes to periodic monitoring	PM emission limits increased due to increased ventilation air flow through new hammermill
SV003 Fermentation scrubber	Title I Condition VOC \leq 7.0 lbs/hr	No changes to periodic monitoring	VOC limit remains the same when venting directly to atmosphere
SV004 Thermal oxidizer, controls DDGS dryer emissions	Title I Condition PM \leq 5.0 lbs/hr PM ₁₀ \leq 5.0 lbs/hr PM _{2.5} \leq 5.0 lbs/hr	No changes to periodic monitoring	Periodic monitoring remains the same as in the current permit and includes continuous temperature monitoring with a specified minimum temperature and maintenance requirements

SV010 EU037 through EU044 Iso- butanol units	Title I Condition VOC \leq 2.54 lbs/hr	No changes to periodic monitoring	One new isobutanol unit will be vented through the existing distillation scrubber. The emission limits on the scrubber stack are proposed to remain the same as the previous permit
SV014 Cooling cyclone	Title I Condition PM \leq 0.80 lbs/hr PM10 \leq 0.80 lbs/hr PM2.5 \leq 0.12 lbs/hr	No changes to periodic monitoring	Periodic monitoring remains the same as in the current permit.
EU029 Grain dryer	Title I Condition	Tracking of daily operating hours	Allowed operating hours changed
FS001 Truck traffic road dust	Minn. R. 7011.0150 and Ch. 7009	No changes to periodic monitoring	Periodic monitoring remains the same as in the current permit and includes records of the number and type of truck traffic. Road silt tests required by permit action 008 have been completed.

*Where the requirement appears in the permit (e.g., EU, SV, GP, etc.)

3.4 Insignificant Activities

No new insignificant activities are added through this permit action.

3.5 Comments Received

Public Notice and EPA Review Period: April 15, 2011 - May 16, 2011

No comments were received and no changes were made to the draft/proposed permit.

4. **Permit Fee Assessment**

Attachment 3 to this TSD contains the MPCA's assessment of Application and Additional Points used to determine the permit application fee for this permit action as required by Minn. R. 7002.0019. The permit action includes two permit applications, both received after the effective date of the rule (July 1, 2009), and also a reopening for which there are no fees. This permit action includes air dispersion modeling.

5. Conclusion

Based on the information provided by Gevo / Agri-Energy, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13300023-009 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: David Beil (permit writer/engineer)
 Dennis Becker (dispersion modeling review)
 Jennifer Lovette (enforcement)
 Sean O'Connor (stack testing)
 Jessica Forsberg (peer reviewer)

AQ File No. 3776; DQ 3322, 3074, 3118

Attachments: 1. Facility Description including PTE summary
 2. CD-01 Forms
 3. Points Calculator

Attachment 1 - Facility Description and PTE Summary



FACILITY DESCRIPTION: EMISSION UNIT (EU)

Show: Active and Pending Records

Action: PER 009

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

ID No.	Emission Unit Status	Added By (Action)	Retired By (Action)	Insignificant Activity	Operator ID for Item	Stack/Vent ID No(s).	Control Equip. ID No(s).	Operator Description	Manufacturer	Model Number	SIC	Max. Design Capacity	Maximum Design Capacity			Max Fuel Input (mil Btu)
													Materials	Units n	Units d	
1	EU 001	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	Corn Dump Pit/Auger	Schlagel	1614	2869	250		Ft3		
2	EU 002	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	Corn Elevator	Schlagel	76137	2869	7500		Bushel Hr		
3	EU 003	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	Scalper	Baasch & Sons Inc.	4x20	2869	7500		Bushel Hr		
4	EU 004	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	Corn Bin	GSI	3024	2869	36000		Bushel		
5	EU 005	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	Corn Bin	GSI	6024	2869	150000		Bushel		
6	EU 006	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	Corn Bin	GSI	NCHT21-15-15	2869	19000		Bushel		
7	EU 007	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	Corn Bin	GSI	6024	2869	150000		Bushel		
8	EU 008	Active	PER 008	<input type="checkbox"/>		SV 002 (M)	CE 002	Hammermill/Belt Scale	Bliss/Ramsey	E-2636TEA	2869	38000		Lb Hr		
9	EU 009	Active	PER 008	<input type="checkbox"/>		SV 010 (M)	CE 005	Beer Stripper	Nova Fabricating	custom	2869					
10	EU 009	Active	PER 009	<input type="checkbox"/>		SV 004 (M) SV 010 (M)	CE 005 CE 007	Beer Stripper	Nova Fabricating	custom	2869					
11	EU 010	Active	PER 008	<input type="checkbox"/>		SV 010 (M)	CE 005	Rectifier	Nova Fabricating	custom	2869					
12	EU 010	Active	PER 009	<input type="checkbox"/>		SV 004 (M) SV 010 (M)	CE 005 CE 007	Rectifier	Nova Fabricating	custom	2869					
13	EU 011	Active	PER 008	<input type="checkbox"/>		SV 010 (M)	CE 005	Side Stripper	Nova Fabricating	custom	2869					
14	EU 011	Active	PER 009	<input type="checkbox"/>		SV 004 (M) SV 010 (M)	CE 005 CE 007	Side Stripper	Nova Fabricating	custom	2869					
15	EU 012	Active	PER 008	<input type="checkbox"/>		SV 010 (M)	CE 005	Molecular Sieve	All Tank Sales & Suppl	custom	2869					
16	EU 012	Active	PER 009	<input type="checkbox"/>		SV 004 (M) SV 010 (M)	CE 005 CE 007	Molecular Sieve	All Tank Sales & Suppl	custom	2869					
17	EU 013	Active	PER 004	<input type="checkbox"/>		SV 013 (M)		DDGS Piling/Storage Operations	TBD	TBD	2869	495000		Ft3		
18	EU 014	Active	PER 008	<input type="checkbox"/>		SV 010 (M)		Evaporator	Felker Fab	custom	2869					
19	EU 014	Active	PER 009	<input type="checkbox"/>		SV 004 (M) SV 010 (M)	CE 005 CE 007	Evaporator	Felker Fab	custom	2869					
20	EU 015	Active	PER 008	<input type="checkbox"/>		SV 004 (M)	CE 004 CE 007	DDGS Dryer/Burner	ICM/Eclipse	18V	2869	21500	DDGS	Lb Hr	60	
21	EU 015	Active	PER 009	<input type="checkbox"/>		SV 004 (M)	CE 004 CE 007	DDGS Dryer/Burner	ICM/Eclipse	18V	2869	21500	DDGS	Lb Hr	55	
22	EU 016	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	DDGS Dump Pit/Auger	Schlagel	1614	2869	5000		Bushel Hr		
23	EU 017	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	DDGS Elevator	Schlagel	76167	2869	5000		Bushel Hr		
24	EU 018	Active	PER 008	<input type="checkbox"/>		SV 011 (M)		Boiler No. 1	Johnston	PFTA1500-4G1505	2869	2000	Energy	Hp	83.7	

FACILITY DESCRIPTION: EMISSION UNIT (EU)

	ID No.	Emission Unit Status	Added By (Action)	Commence Const. Date	Initial Startup Date	Removal Date	Firing Method	Pct. Fuel/ Space Heat	Bottleneck	Elevator Type
1	EU 001	Active	PER 008							
2	EU 002	Active	PER 008							
3	EU 003	Active	PER 008							
4	EU 004	Active	PER 008							
5	EU 005	Active	PER 008							
6	EU 006	Active	PER 008							
7	EU 007	Active	PER 008							
8	EU 008	Active	PER 008							
9	EU 009	Active	PER 008							
10	EU 009	Active	PER 009							
11	EU 010	Active	PER 008							
12	EU 010	Active	PER 009							
13	EU 011	Active	PER 008							
14	EU 011	Active	PER 009							
15	EU 012	Active	PER 008							
16	EU 012	Active	PER 009							
17	EU 013	Active	PER 004							
18	EU 014	Active	PER 008							
19	EU 014	Active	PER 009							
20	EU 015	Active	PER 008							
21	EU 015	Active	PER 009							
22	EU 016	Active	PER 008							
23	EU 017	Active	PER 008							
24	EU 018	Active	PER 008					2		



FACILITY DESCRIPTION: EMISSION UNIT (EU)

Show: Active and Pending Records

Action: PER 009

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

ID No.	Emission Unit Status	Added By (Action)	Retired By (Action)	Insignificant Activity	Operator ID for Item	Stack/Vent ID No(s).	Control Equip. ID No(s).	Operator Description	Manufacturer	Model Number	SIC	Max. Design Capacity	Maximum Design Capacity			Max Fuel Input (mil Btu)
													Materials	Units n	Units d	
25	EU 019	Active	PER 008	<input type="checkbox"/>		SV 012 (M)		Distillation/Fermentation Bldg	Aljay	custom	2869	60000		Ft3		
26	EU 020	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	Rail Load Spout	Schlagel	custom	2869	5000		Bushel	Hr	
27	EU 021	Active	PER 003	<input type="checkbox"/>		SV 001 (M)	CE 001	Screw Conveyor	Schlagel	TBD	2869	5000		Bushel	Hr	
28	EU 022	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	Truck Load Spout	Schlagel	custom	2869	5000		Bushel	Hr	
29	EU 023	Removed	EIS 002	<input type="checkbox"/>				Ethanol Loading Rack	TBD	TBD	2869	300		Gal	Min	
30	EU 024	Active	PER 008	<input type="checkbox"/>		SV 014 (M)		Cooling Cyclone	Kleespie Tank	custom	2869	9000		Ft3	Min	
31	EU 025	Active	PER 008	<input type="checkbox"/>		SV 003 (M)	CE 003	Fermenter	Brown Minneapolis	97-B162706	2869	250000		Gal		
32	EU 025	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Fermenter	Brown Minneapolis	97-B162706	2869	250000		Gal		
33	EU 026	Active	PER 008	<input type="checkbox"/>		SV 003 (M)	CE 003	Fermenter	Brown Minneapolis	97-B162706	2869	250000		Gal		
34	EU 026	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Fermenter	Brown Minneapolis	97-B162706	2869	250000		Gal		
35	EU 027	Active	PER 008	<input type="checkbox"/>		SV 003 (M)	CE 003	Fermenter	Brown Minneapolis	97-B162706	2869	250000		Gal		
36	EU 027	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Fermenter	Brown Minneapolis	97-B162706	2869	250000		Gal		
37	EU 028	Active	PER 008	<input type="checkbox"/>		SV 003 (M)	CE 003	Beer Well	Brown Minneapolis	97-B162706	2869	250000		Gal		
38	EU 028	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Beer Well	Brown Minneapolis	97-B162706	2869	250000		Gal		
39	EU 029	Active	PER 008	<input type="checkbox"/>		SV 015 (M)		Grain Dryer	Superb Energy Miser	SE1200C	2869	1300		Bushel	Hr	
40	EU 029	Active	PER 009	<input type="checkbox"/>		SV 015 (M)		Grain Dryer	Superb Energy Miser	SE1200C	2869	1200	Grain	Bushel	Hr	
41	EU 030	Active	PER 008	<input type="checkbox"/>		SV 016 (M)		Bio-Digester Flare	Eclipse Veri-flame	5600	2869	12600		Ft3	Day	.0147
42	EU 031	Active	PER 005	<input type="checkbox"/>		SV 010 (M)	CE 001	bushel corn bin	GSI	NCL 90	2869	400,000		Bushel		
43	EU 031	Active	PER 009	<input type="checkbox"/>		SV 001 (M)	CE 001	bushel corn bin	GSI	NCL 90	2869	400,000		Bushel		
44	EU 032	Removed	PER 008	<input type="checkbox"/>				Heat Recovery Boiler	Victory	2561	2869	95		Mmbtu	Hr	95
45	EU 033	Active	PER 008	<input type="checkbox"/>				Boiler No. 2	Johnston	PFTA-1500-4-G-150S	2869	62	Heat	Mmbtu	Hr	62
46	EU 034	Active	PER 008	<input type="checkbox"/>		SV 004 (M)	CE 007	Regenerative Thermal Oxidizer	Eisenmann	6x6	2869					
47	EU 034	Active	PER 009	<input type="checkbox"/>		SV 004 (M)	CE 007	Regenerative Thermal Oxidizer	Eisenmann	6x6	2869	18	Heat	Mmbtu	Hr	18
48	EU 035	Active	PER 008	<input type="checkbox"/>		SV 003 (M)	CE 003	Fermenter #4	Brown	TBD	2869	265000		Gal		

FACILITY DESCRIPTION: EMISSION UNIT (EU)

	ID No.	Emission Unit Status	Added By (Action)	Commence Const. Date	Initial Startup Date	Removal Date	Firing Method	Pct. Fuel/Space Heat	Bottleneck	Elevator Type
25	EU 019	Active	PER 008							
26	EU 020	Active	PER 008							
27	EU 021	Active	PER 003							
28	EU 022	Active	PER 008							
29	EU 023	Removed	EIS 002			12/31/2000				
30	EU 024	Active	PER 008							
31	EU 025	Active	PER 008							
32	EU 025	Active	PER 009							
33	EU 026	Active	PER 008							
34	EU 026	Active	PER 009							
35	EU 027	Active	PER 008							
36	EU 027	Active	PER 009							
37	EU 028	Active	PER 008							
38	EU 028	Active	PER 009							
39	EU 029	Active	PER 008							
40	EU 029	Active	PER 009							
41	EU 030	Active	PER 008							
42	EU 031	Active	PER 005	07/09/2001	09/01/2001					
43	EU 031	Active	PER 009	07/09/2001	09/01/2001					
44	EU 032	Removed	PER 008							
45	EU 033	Active	PER 008	08/15/2006						
46	EU 034	Active	PER 008							
47	EU 034	Active	PER 009							
48	EU 035	Active	PER 008	01/15/2009	01/30/2009					



FACILITY DESCRIPTION: EMISSION UNIT (EU)

Show: Active and Pending Records
 Action: PER 009
 AQD Facility ID: 13300023
 Facility Name: Agri-Energy LLC

ID No.	Emission Unit Status	Added By (Action)	Retired By (Action)	Insignificant Activity	Operator ID for Item	Stack/Vent ID No(s).	Control Equip. ID No(s).	Operator Description	Manufacturer	Model Number	SIC	Max. Design Capacity	Maximum Design Capacity			Max Fuel Input (mil Btu)
													Materials	Units n	Units d	
49	EU 035	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Fermenter #4	Brown	TBD	2869	265000		Gal		
50	EU 036	Active	PER 008	<input type="checkbox"/>		SV 001 (M)	CE 001	Grain bin			2869					
51	EU 037	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Isobutanol unit 37	tbd	tbd	2869		Material	Gal	Day	
52	EU 038	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Isobutanol unit 38	tbd	tbd	2869		Material	Lb	Hr	
53	EU 039	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Isobutanol unit 39	tbd	tbd	2869		Material	Gal	Min	
54	EU 040	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Isobutanol unit 40	tbd	tbd	2869		Material	Gal	Min	
55	EU 041	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Isobutanol unit 41	tbd	tbd	2869		Material	Gal	Min	
56	EU 042	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Isobutanol unit 42	tbd	tbd	2869		Material	Gal	Min	
57	EU 043	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Isobutanol unit 43	tbd	tbd	2869		Material	Gal	Min	
58	EU 044	Active	PER 009	<input type="checkbox"/>		SV 004 (M) SV 010 (M)	CE 005 CE 007	Isobutanol unit 44	tbd	tbd	2869		Material	Gal	Day	
59	EU 045	Active	PER 009	<input type="checkbox"/>		SV 002 (M)	CE 002	Hammermill/Belt Scale	Bliss	E-4430-TFA	2869	64000	Corn	Lb	Hr	
60	EU 046	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Isobutanol unit 46	tbd	tbd	2869					
61	EU 047	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Isobutanol unit 47	tbd	tbd	2869					
62	EU 048	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Isobutanol unit 48	tbd	tbd	2869					
63	EU 049	Active	PER 009	<input type="checkbox"/>		SV 003 (M) SV 004 (M)	CE 003 CE 007	Isobutanol unit 49	tbd	tbd	2869					

FACILITY DESCRIPTION: EMISSION UNIT (EU)

	ID No.	Emission Unit Status	Added By (Action)	Commence Const. Date	Initial Startup Date	Removal Date	Firing Method	Pct. Fuel/ Space Heat	Bottleneck	Elevator Type
49	EU 035	Active	PER 009	01/15/2009	01/30/2009					
50	EU 036	Active	PER 008							
51	EU 037	Active	PER 009	05/01/2011	01/31/2012					
52	EU 038	Active	PER 009	05/01/2011	01/31/2012					
53	EU 039	Active	PER 009	05/01/2011	01/31/2012					
54	EU 040	Active	PER 009	05/01/2011	01/31/2012					
55	EU 041	Active	PER 009	05/01/2011	01/31/2012					
56	EU 042	Active	PER 009	05/01/2011	01/31/2012					
57	EU 043	Active	PER 009	05/01/2011	01/31/2012					
58	EU 044	Active	PER 009	05/01/2011	01/31/2012					
59	EU 045	Active	PER 009	03/01/2011	03/15/2011					
60	EU 046	Active	PER 009	05/01/2011	01/31/2012					
61	EU 047	Active	PER 009	05/01/2011	01/31/2012					
62	EU 048	Active	PER 009	05/01/2011	01/31/2011					
63	EU 049	Active	PER 009	05/01/2011	01/31/2012					



FACILITY DESCRIPTION: STACK/VENTS (SV)

Show: Active and Pending Records

Action: PER 009

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

ID No.	Stack/ Vent Status	Added By (Action)	Retired By (Action)	Operator ID for Item	Operators Description	Height of Opening From Ground (feet)	Inside Dimensions		Design Flow Rate at Top (ACFM)	Exit Gas Temperature at Top (°F)	Flow Rate/ Temperature Information Source	Discharge Direction
							Diameter or Length (feet)	Width (feet)				
1	SV 001	Active	PER 008		Grain/DDGS Handling (CE 001)	10	1.66		8500	68	Estimate	Up, With Cap
2	SV 001	Active	PER 009		Grain/DDGS Handling (CE 001)	60	1.66		8500	68	Estimate	Up, With Cap
3	SV 002	Active	PER 008		Hammermill (CE 002)	12	1		4600	68	Estimate	Up, With Cap
4	SV 003	Active	PER 004		Fermentation scrubber (CE 003)	30	1		2700	90	Estimate	Up, No Cap
5	SV 004	Active	PER 008		DDGS Dryer (CE 004, CE007)	175	4.66		45716	308	Estimate	Up, No Cap
6	SV 004	Active	PER 009		Thermal Oxidizer (CE007)	175	4.66		45716	308	Estimate	Up, No Cap
7	SV 005	Active	PER 003		Tank 6	30	.5				Estimate	Up, With Cap
8	SV 006	Active	PER 003		Tank 7	30	.5				Estimate	Up, With Cap
9	SV 007	Active	PER 003		Tank 8	24	.5				Estimate	Up, With Cap
10	SV 008	Active	PER 003		Tank 9	30	.5				Estimate	Up, With Cap
11	SV 009	Active	PER 003		Tank 10	30	.5				Estimate	Up, With Cap
12	SV 010	Active	PER 004		Distillation scrubber (CE 005)	45	.67		400	90	Estimate	Up, No Cap
13	SV 011	Active	PER 008		Boiler No. 1 (EU018)	35	2.67		16000	280	Estimate	Up, No Cap
14	SV 012	Active	PER 003		Fermentation/Distillation ventilation	45	2	2	93000		Estimate	Horizontal
15	SV 013	Active	PER 003		DDGS Storage ventilation	30	3	3	21000		Estimate	Horizontal
16	SV 014	Active	PER 008		Cooling cyclone	62	1.5		9000	88	Estimate	Up, No Cap
17	SV 015	Active	PER 003		Grain Dryer	15	12	5	6000	250	Estimate	Up, No Cap
18	SV 016	Active	PER 003		Flare	20	.33		500	1400	Estimate	Up, No Cap
19	SV 017	Active	PER 008		Boiler No. 2 (EU033)	35	2.67		16000	260	Estimate	Up, unknown Cap



FACILITY DESCRIPTION: CONTROL EQUIPMENT (CE)

Show: Active and Pending Records

Action: PER 009

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

	ID No.	Control Equip. Status	Added By (Action)	Retired By (Action)	Operator ID for Item	Control Equip. Type	Control Equipment Description	Manufacturer	Model	Pollutants Controlled	Capture Efficiency (%)	Destruction/Collection Efficiency (%)	Afterburner Combustion Parameters
1	CE 001	Active	PER 008			018	Fabric Filter - Low Temperature, i.e., T<180 Degrees F	MAC	custom	PM	80	99	
2	CE 001	Active	PER 009			018	Fabric Filter - Low Temperature, i.e., T<180 Degrees F	MAC	custom	PM2.5 PM10 PM PM	80 80 80 80	92.6 98.2 99 99.3	
3	CE 002	Active	PER 008			018	Fabric Filter - Low Temperature, i.e., T<180 Degrees F	MAC	custom	PM10 PM	100 100	99 99	
4	CE 002	Active	PER 009			018	Fabric Filter - Low Temperature, i.e., T<180 Degrees F	MAC	custom	PM2.5 PM10 PM10 PM	100 100 100 100	93 99 93 99	
5	CE 003	Active	PER 008			050	Packed-Gas Adsorption Column	Broin	054456	VOC	100	95	
6	CE 004	Active	PER 008			076	Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones	ICM	custom	PM10 PM	100 100	80 80	
7	CE 004	Active	PER 009			076	Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones	ICM	custom	PM10 PM10 PM PM	100 100 100 100	80 72 80 90	
8	CE 005	Active	PER 008			050	Packed-Gas Adsorption Column	Broin	018240	VOC	100	95	
9	CE 006	Removed	PER 008			099	Thermal Oxidizer	MMT	Custom				1250 degrees F
10	CE 007	Active	PER 008			131	Thermal Oxidizer	MMT	Sigma Series	VOC	100	95	1565 degrees F
11	CE 007	Active	PER 009			131	Thermal Oxidizer	MMT	Sigma Series	CO VOC	100 100	90 95	1565 degrees F



FACILITY DESCRIPTION: STORAGE TANKS (TK)

Show: Active and Pending Records

Action: PER 009

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

ID No.	Tank Status	Added By (Action)	Retired By (Action)	Insignif-icant Activity	Operator ID for Item	Control Equip. ID No(s).	Product Stored	Interior Height (ft.)	Interior Diameter (ft.)	Capacity (1000 gal)	Construction Type
1	TK 001	Active	PER 003		<input type="checkbox"/>		CE 005 Corn Mash (Slurry Tank)	12	10	7	Fixed Roof
2	TK 002	Active	PER 003		<input type="checkbox"/>		Corn Mash (Liquefaction Tank)	14	11	10	Fixed Roof
3	TK 003	Active	PER 003		<input type="checkbox"/>		Corn Mash (Liquefaction Tank)	14	11	10	Fixed Roof
4	TK 004	Active	PER 003		<input type="checkbox"/>	CE 005	Corn Mash (Yeast Tank)	14	11	10	Fixed Roof
5	TK 005	Active	PER 003		<input type="checkbox"/>	CE 005	Ethanol (Productio Rundown Tank)	12	4	.95	Fixed Roof
6	TK 005	Active	PER 009		<input type="checkbox"/>	CE 005	Production Rundown Tank - ethanol or isobutanol	12	4	.95	Fixed Roof
7	TK 006	Active	PER 001		<input type="checkbox"/>		Ethanol (CAS #64-17-5), 95%	30	20	70	Fixed Roof
8	TK 006	Active	PER 009		<input type="checkbox"/>		Isobutanol or Ethanol, 95%	30	20	70	Fixed Roof
9	TK 007	Active	PER 003		<input type="checkbox"/>		Ethanol (CAS #64-17-5), 100%	31	16	47	Fixed Roof
10	TK 007	Active	PER 009		<input type="checkbox"/>		Isobutanol or Ethanol, 100%	31	16	47	Fixed Roof
11	TK 008	Active	PER 001		<input type="checkbox"/>		Unleaded Gas (CAS #8006-61-9), 100%	21	12	18	Fixed Roof
12	TK 008	Active	PER 009		<input type="checkbox"/>		Unleaded Gas, 100%	21	12	18	Fixed Roof
13	TK 009	Active	PER 001		<input type="checkbox"/>		Ethanol (CAS #64-17-5), 95%; Unleaded Gas (CAS #8006-61-9), 5%	32	32	186	Internal Floating Roof
14	TK 009	Active	PER 009		<input type="checkbox"/>		Isobutanol or Ethanol, 95% with Unleaded Gas, 5%	32	32	186	Internal Floating Roof
15	TK 010	Active	PER 001		<input type="checkbox"/>		Ethanol (CAS #64-17-5), 95%; Unleaded Gas (CAS #8006-61-9), 5%	32	32	186	Internal Floating Roof
16	TK 010	Active	PER 009		<input type="checkbox"/>		Isobutanol or Ethanol, 95% with Unleaded Gas, 5%	32	32	186	Internal Floating Roof

FACILITY DESCRIPTION: STORAGE TANKS (TK)

	ID No.	Tank Status	Added By (Action)	Support Type (floating roof only)	Column Count	Column Diameter (ft.)	Deck Type (floating roof only)	Seal Type (floating roof only)	Year Installed	Year Removed
1	TK 001	Active	PER 003							
2	TK 002	Active	PER 003							
3	TK 003	Active	PER 003							
4	TK 004	Active	PER 003							
5	TK 005	Active	PER 003							
6	TK 005	Active	PER 009							
7	TK 006	Active	PER 001							
8	TK 006	Active	PER 009							
9	TK 007	Active	PER 003							
10	TK 007	Active	PER 009							
11	TK 008	Active	PER 001							
12	TK 008	Active	PER 009							
13	TK 009	Active	PER 001	Column Supported Roof, Construction Type †	1	1	Bolted, Detail Not Specified	Resilient seal (nonmetallic), with rim mounted		
14	TK 009	Active	PER 009	Column Supported Roof, Construction Type †	1	1	Bolted, Detail Not Specified	Resilient seal (nonmetallic), with rim mounted		
15	TK 010	Active	PER 001	Column Supported Roof, Construction Type †	1	1	Bolted, Detail Not Specified	Resilient seal (nonmetallic), with rim mounted		
16	TK 010	Active	PER 009	Column Supported Roof, Construction Type †	1	1	Bolted, Detail Not Specified	Resilient seal (nonmetallic), with rim mounted		



FACILITY DESCRIPTION: FUGITIVE SOURCES (FS)

Show: Active and Pending Records

Action: PER 009

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

	ID No.	Fugitive Source Status	Added By (Action)	Retired By (Action)	Insignificant Activity	Operator ID for Item	Pollutant(s) Emitted	Control Equip. ID No(s).	Fugitive Source Description	Year Installed	Year Removed
1	FS 001	Active	PER 008		<input type="checkbox"/>		PM		Truck Traffic	1997	
2	FS 002	Active	PER 008		<input type="checkbox"/>		PM		Grain Handling	1997	
3	FS 003	Active	PER 008		<input type="checkbox"/>		VOC		Ethanol Product Loading	1997	
4	FS 004	Active	PER 008		<input type="checkbox"/>		PM		DDGS Handling	1997	
5	FS 005	Active	PER 008		<input type="checkbox"/>		VOC		Tank Valve, Flange, Seal Leaks	1997	
6	FS 006	Active	PER 008		<input type="checkbox"/>		PM PM10		Cooling towers	1997	

FACILITY DESCRIPTION: Potential-to-emit (by pollutant)

Show: Active and Pending Records

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

Pollutant	Item	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
Acetaldehyde							
	SV 003	PER 008		7.370E-01	6.456E+01	3.228E+00	3.000E+00
	SV 003	PER 009		7.370E-01	6.456E+01	3.228E+00	
	SV 004	PER 008		2.090E-01	1.830E+01	9.150E-01	9.000E-01
	SV 004	PER 009		2.090E-01	1.830E+01	9.150E-01	
	SV 010	PER 008		4.900E-04	4.200E-02	2.100E-03	2.000E-03
	SV 010	PER 009		4.900E-04	4.200E-02	2.100E-03	
	SV 014	PER 008		1.950E-01	8.540E-01	8.540E-01	8.000E-01
	SV 014	PER 009		1.950E-01	8.540E-01	8.540E-01	
Totals					8.376E+01	4.999E+00	0.000E+00
Acrolein							
	SV 003	PER 008		1.000E-02	8.800E-01	4.400E-02	4.000E-02
	SV 004	PER 008		4.400E-02	3.860E+00	1.930E-01	1.000E-01
	SV 010	PER 008		3.200E-03	2.800E-01	1.400E-02	1.000E-02
	SV 014	PER 008		7.700E-02	3.370E-01	3.370E-01	3.000E-01
Totals					5.357E+00	5.880E-01	4.500E-01
Benzene							
	FS 003	PER 008		3.000E-03	1.200E-02	1.200E-02	1.000E-02
	SV 007	PER 004		3.100E-02	1.350E-01	1.350E-01	
	SV 008	PER 004		1.000E-04	4.000E-04	4.000E-04	
	SV 009	PER 004		1.000E-04	4.000E-04	4.000E-04	
	TK 008	PER 004		3.000E-02	1.350E-01	1.350E-01	
	TK 009	PER 004		1.000E-04	4.000E-04	4.000E-04	
	TK 010	PER 004		1.000E-04	4.000E-04	4.000E-04	
Totals					2.836E-01	2.836E-01	1.000E-02
Carbon Dioxide Equivalent							
	EU 015	PER 009		7.244E+03	0.000E+00	0.000E+00	
	EU 018	PER 009		1.102E+04	0.000E+00	0.000E+00	
	EU 033	PER 009		8.165E+03	0.000E+00	0.000E+00	
	FC 000	PER 009		4.770E+04	2.089E+05	9.000E+04	
	SV 003	PER 009		1.874E+04	0.000E+00	0.000E+00	
	SV 004	PER 009		2.529E+03	0.000E+00	0.000E+00	
Totals					2.089E+05	9.000E+04	0.000E+00
Carbon Monoxide							
	EU 018	PER 008		4.960E+00	2.172E+01	2.172E+01	
	EU 018	PER 009		4.960E+00	2.172E+01	2.172E+01	
	EU 029	PER 008		6.400E-01	2.800E+00	7.400E-01	

FACILITY DESCRIPTION: Potential-to-emit (by pollutant)

Show: Active and Pending Records

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

Pollutant	Item	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
Carbon Monoxide							
	EU 029	PER 009		6.400E-01	2.800E+00	7.400E-01	
	EU 033	PER 008		4.960E+00	2.172E+01	2.172E+01	
	EU 033	PER 009		4.960E+00	2.172E+01	2.172E+01	
	GP 001	PER 007		0.000E+00	0.000E+00	0.000E+00	
	GP 001	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 004	PER 007		8.000E+00	3.504E+01	3.504E+01	
	SV 004	PER 009		8.000E+00	3.500E+02	3.504E+01	
	SV 011	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 011	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 015	PER 008		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	SV 015	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 016	PER 008		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	SV 016	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 017	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 017	PER 009		0.000E+00	0.000E+00	0.000E+00	
Totals					3.962E+02	7.922E+01	0.000E+00
Carbon Dioxide							
	EU 015	PER 009		7.202E+03	3.155E+04	0.000E+00	
	EU 018	PER 009		1.096E+04	4.801E+04	0.000E+00	
	EU 033	PER 009		8.119E+03	3.556E+04	0.000E+00	
	FC 000	PER 009		4.754E+04	0.000E+00	8.970E+04	
	SV 003	PER 009		1.874E+04	8.207E+04	0.000E+00	
	SV 004	PER 009		2.520E+03	1.104E+04	0.000E+00	
Totals					2.082E+05	8.970E+04	0.000E+00
Ethylbenzene							
	FS 003	PER 008		5.000E-04	2.000E-03	2.000E-03	1.000E-03
	TK 008	PER 008		6.000E-03	2.800E-02	2.800E-02	2.000E-02
Totals					3.000E-02	3.000E-02	2.100E-02
Formaldehyde							
	FC 000	PER 008		1.400E-02	5.900E-02	5.900E-02	5.000E-02
	SV 003	PER 008		1.100E-02	9.600E-01	4.800E-02	4.000E-02
	SV 004	PER 008		4.000E-02	3.860E+00	1.930E-01	1.000E-01
	SV 010	PER 008		1.200E-04	1.100E-02	5.300E-04	5.000E-04
	SV 014	PER 008		3.600E-02	1.580E-01	1.580E-01	1.000E-01
Totals					5.048E+00	4.585E-01	2.905E-01

FACILITY DESCRIPTION: Potential-to-emit (by pollutant)

Show: Active and Pending Records

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

Pollutant	Item	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
Hexane							
	FC 000	PER 008		3.200E-01	1.400E+00	1.400E+00	1.000E+00
	FS 003	PER 008		8.000E-03	3.700E-02	3.700E-02	3.000E-02
	TK 008	PER 008		9.600E-02	4.210E-01	4.210E-01	4.000E-01
Totals					1.858E+00	1.858E+00	1.430E+00
Methanol							
	SV 003	PER 008		1.000E-02	8.800E-01	4.400E-02	4.000E-02
	SV 004	PER 008		1.980E-01	1.734E+01	8.670E-01	8.000E-01
	SV 010	PER 008		5.300E-05	5.000E-03	2.300E-04	2.000E-04
	SV 014	PER 008		7.700E-02	3.370E-01	3.370E-01	3.000E-01
Totals					1.856E+01	1.248E+00	1.140E+00
HAPs - Total							
	FC 000	PER 008		3.396E-01	1.487E+00	1.487E+00	1.400E+00
	FC 000	PER 009		3.396E-01	1.487E+00	1.487E+00	1.400E+00
	FS 003	PER 008		1.800E-02	8.000E-02	8.000E-02	7.000E-02
	FS 003	PER 009		1.800E-02	8.000E-02	8.000E-02	7.000E-02
	FS 005	PER 008		1.100E-01	5.000E-01	5.000E-01	5.000E-01
	FS 005	PER 009		1.100E-01	5.000E-01	5.000E-01	5.000E-01
	GP 001	PER 007		0.000E+00	0.000E+00	0.000E+00	
	SV 003	PER 008		7.680E-01	6.728E+01	3.364E+00	3.000E+00
	SV 003	PER 009		7.680E-01	6.728E+01	3.364E+00	3.000E+00
	SV 004	PER 008		4.600E-01	4.040E+01	2.168E+00	2.000E+00
	SV 004	PER 009		4.600E-01	4.040E+01	2.168E+00	2.000E+00
	SV 007	PER 008					
	SV 007	PER 009					
	SV 008	PER 008					
	SV 008	PER 009					
	SV 009	PER 008					
	SV 009	PER 009					
	SV 010	PER 008		3.860E-03	3.380E-01	1.700E-02	1.500E-02
	SV 010	PER 009		3.860E-03	3.380E-01	1.700E-02	1.500E-02
	SV 014	PER 008		3.850E-01	1.686E+00	1.686E+00	1.500E+00
	SV 014	PER 009		3.850E-01	1.686E+00	1.686E+00	1.500E+00
	TK 008	PER 008		2.050E-01	9.000E-01	9.000E-01	8.000E-01
	TK 008	PER 009		2.050E-01	9.000E-01	9.000E-01	8.000E-01
	TK 009	PER 008		2.500E-03	1.000E-02	1.000E-02	1.000E-02

FACILITY DESCRIPTION: Potential-to-emit (by pollutant)

Show: Active and Pending Records

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

Pollutant	Item	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
HAPs - Total							
	TK 009	PER 009		2.500E-03	1.000E-02	1.000E-02	1.000E-02
	TK 010	PER 008		2.500E-03	1.000E-02	1.000E-02	1.000E-02
	TK 010	PER 009		2.500E-03	1.000E-02	1.000E-02	1.000E-02
Totals					1.127E+02	1.022E+01	9.305E+00
Toluene							
	FS 003	PER 008		1.600E-03	7.000E-03	7.000E-03	5.000E-03
	SV 007	PER 003					
	SV 008	PER 003					
	SV 009	PER 003					
	TK 008	PER 008		1.900E-02	8.400E-02	8.400E-02	8.000E-02
Totals					9.100E-02	9.100E-02	8.500E-02
Xylenes (mixed isomers)							
	FS 003	PER 008		3.000E-03	1.200E-02	1.200E-02	1.000E-02
	TK 008	PER 008		3.200E-02	1.400E-01	1.400E-01	1.000E-01
Totals					1.520E-01	1.520E-01	1.100E-01
Nitrous Oxide							
	EU 015	PER 009		1.300E-01	5.800E-01	0.000E+00	
	EU 018	PER 009		2.000E-01	8.800E-01	0.000E+00	
	EU 033	PER 009		1.500E-01	6.500E-01	0.000E+00	
	FC 000	PER 009		5.340E-01	2.340E+00	1.000E+00	
	SV 004	PER 009		5.400E-02	2.400E-01	0.000E+00	
Totals					4.690E+00	1.000E+00	0.000E+00
Nitrogen Oxides							
	EU 018	PER 008		1.287E+01	5.639E+01	3.603E+01	
	EU 018	PER 009		1.287E+01	5.639E+01	3.603E+01	
	EU 029	PER 008		7.600E-01	3.340E+00	8.800E-01	
	EU 029	PER 009		7.600E-01	3.340E+00	8.800E-01	
	EU 033	PER 008		1.287E+01	5.639E+01	1.726E+01	
	EU 033	PER 009		1.287E+01	5.639E+01	1.726E+01	
	GP 001	PER 007		0.000E+00	0.000E+00	0.000E+00	
	GP 001	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 004	PER 007		3.820E+00	1.671E+01	1.671E+01	
	SV 004	PER 009		3.820E+00	5.002E+01	2.033E+01	
	SV 011	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 011	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 015	PER 008		0.000E+00	0.000E+00	0.000E+00	0.000E+00

FACILITY DESCRIPTION: Potential-to-emit (by pollutant)

Show: Active and Pending Records
 AQD Facility ID: 13300023
 Facility Name: Agri-Energy LLC

Pollutant	Item	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
Nitrogen Oxides							
	SV 015	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 016	PER 008		0.000E+00		0.000E+00	0.000E+00
	SV 016	PER 009		0.000E+00		0.000E+00	
	SV 017	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 017	PER 009		0.000E+00	0.000E+00	0.000E+00	
Totals					1.661E+02	7.450E+01	0.000E+00
PM < 2.5 micron							
	EU 018	PER 008		4.500E-01	1.970E+00	1.970E+00	
	EU 018	PER 009		4.500E-01	1.970E+00	1.970E+00	
	EU 029	PER 008		1.100E-01	4.600E-01	4.600E-01	
	EU 029	PER 009		3.200E-01	1.380E+00	4.000E-01	
	EU 033	PER 008		4.500E-01	1.970E+00	1.970E+00	
	EU 033	PER 009		4.500E-01	1.970E+00	1.970E+00	
	FS 001	PER 008		4.000E-02	1.600E+00	1.600E-01	
	FS 001	PER 009		1.900E-01	8.000E+00	1.700E-01	
	FS 002	PER 008		7.000E-02	2.900E+00	2.900E-01	
	FS 002	PER 009		4.200E-01	9.200E+00	2.000E-02	
	FS 004	PER 008		7.000E-03	3.000E-01	3.000E-02	
	FS 004	PER 009		1.500E-02	3.000E-01	2.000E-02	
	FS 006	PER 008		3.200E-01	1.420E+01	1.420E+00	
	FS 006	PER 009		3.400E-01	1.490E+01	1.490E+00	
	SV 001	PER 008		3.700E-01	1.640E+02	1.640E+00	
	SV 001	PER 009		3.700E-01	1.640E+02	1.640E+00	
	SV 002	PER 008		1.700E-01	7.500E+01	7.500E-01	
	SV 002	PER 009		2.200E-01	9.600E+01	9.700E-01	
	SV 004	PER 008		3.000E+00	1.314E+02	1.314E+01	
	SV 004	PER 009		5.000E+00	2.190E+02	2.190E+01	
	SV 014	PER 008		4.000E+00	1.752E+01	1.752E+01	
	SV 014	PER 009		1.200E-01	5.300E-01	5.300E-01	
Totals					5.173E+02	3.108E+01	0.000E+00
PM < 10 micron							
	EU 018	PER 008		4.500E-01	1.970E+00	1.970E+00	
	EU 018	PER 009		4.500E-01	1.970E+00	1.970E+00	
	EU 029	PER 008		2.310E+00	1.012E+01	2.670E+00	
	EU 029	PER 009		1.850E+00	8.090E+00	2.330E+00	

FACILITY DESCRIPTION: Potential-to-emit (by pollutant)

Show: Active and Pending Records

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

Pollutant	Item	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
PM < 10 micron							
	EU 033	PER 008		4.500E-01	1.970E+00	1.970E+00	
	EU 033	PER 009		4.500E-01	1.970E+00	1.970E+00	
	FS 001	PER 008		2.400E-01	1.050E+01	1.050E+00	1.000E+00
	FS 001	PER 009		7.700E-01	3.300E+01	6.500E-01	
	FS 002	PER 008		5.000E-02	4.000E+00	2.900E-01	
	FS 002	PER 009		2.480E+00	5.430E+01	1.600E-01	
	FS 004	PER 008		1.000E-02	3.000E+00	3.000E-02	
	FS 004	PER 009		1.200E-01	3.000E+00	1.600E-01	
	FS 006	PER 008		3.200E-01	1.420E+00	1.420E+00	
	FS 006	PER 009		3.400E-01	1.490E+01	1.490E+00	
	GP 001	PER 007		0.000E+00	0.000E+00	0.000E+00	
	SV 001	PER 008		3.700E-01	1.640E+02	1.640E+00	1.000E+00
	SV 001	PER 009		3.700E-01	1.640E+02	1.640E+00	
	SV 002	PER 008		1.700E-01	7.500E+01	7.500E-01	5.000E-01
	SV 002	PER 009		2.200E-01	9.600E+01	9.700E-01	
	SV 004	PER 008		3.000E+00	1.314E+02	1.314E+01	
	SV 004	PER 009		5.000E+00	2.190E+02	2.190E+01	
	SV 011	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 011	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 013	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 013	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 014	PER 007		4.000E+00	1.752E+01	1.752E+01	
	SV 014	PER 009		8.000E-01	3.500E+00	3.500E+00	
	SV 015	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 015	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 016	PER 008		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	SV 016	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 017	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 017	PER 009		0.000E+00	0.000E+00	0.000E+00	
Totals					5.997E+02	3.674E+01	0.000E+00
Total Particulate Matter							
	EU 018	PER 008		4.500E-01	1.970E+00	1.970E+00	
	EU 018	PER 009		4.500E-01	1.970E+00	1.970E+00	
	EU 029	PER 008		9.240E+00	4.047E+01	1.066E+01	
	EU 029	PER 009		7.390E+00	3.238E+01	9.310E+00	

FACILITY DESCRIPTION: Potential-to-emit (by pollutant)

Show: Active and Pending Records

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

Pollutant	Item	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
Total Particulate Matter							
	EU 033	PER 008		4.500E-01	1.970E+00	1.970E+00	
	EU 033	PER 009		4.500E-01	1.970E+00	1.970E+00	
	FS 001	PER 008		1.220E+00	5.360E+00	5.360E+00	3.000E+00
	FS 001	PER 009		3.900E+00	1.710E+02	6.500E-01	
	FS 002	PER 008		2.700E-01	2.000E+01	1.180E+00	
	FS 002	PER 009		7.560E+00	1.660E+02	1.180E+00	
	FS 004	PER 008		3.000E-02	1.200E+01	1.300E-01	
	FS 004	PER 009		3.000E-02	1.200E+01	1.100E-01	
	FS 006	PER 008		3.200E-01	1.420E+00	1.420E+00	
	FS 006	PER 009		4.900E-01	2.130E+01	2.130E+00	
	GP 001	PER 007		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	GP 001	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 001	PER 008		3.800E-01	1.640E+02	1.640E+00	1.000E+00
	SV 001	PER 009		3.700E-01	1.640E+02	1.640E+00	
	SV 002	PER 008		1.700E-01	7.500E+01	7.500E-01	5.000E-01
	SV 002	PER 009		2.100E-01	9.200E+01	9.700E-01	
	SV 004	PER 008		3.000E+00	1.314E+02	1.314E+01	1.000E+01
	SV 004	PER 009		5.000E+00	2.190E+02	2.190E+01	
	SV 011	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 013	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 014	PER 007		4.000E+00	1.752E+01	1.752E+01	7.050E+00
	SV 014	PER 009		8.000E-01	3.500E+00	3.500E+00	
	SV 015	PER 008		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	SV 015	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 016	PER 008		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	SV 016	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 017	PER 008		0.000E+00	0.000E+00	0.000E+00	
Totals					8.851E+02	4.533E+01	0.000E+00
Sulfur Dioxide							
	EU 018	PER 008		7.000E-02	3.000E-01	1.700E-01	
	EU 018	PER 009		7.000E-02	3.000E-01	1.700E-01	
	EU 029	PER 008		5.000E-03	2.000E-02	1.000E-02	
	EU 029	PER 009		5.000E-03	2.000E-02	1.000E-02	
	EU 033	PER 008		7.000E-02	3.000E-01	1.700E-01	
	EU 033	PER 009		7.000E-02	3.000E-01	1.700E-01	

FACILITY DESCRIPTION: Potential-to-emit (by pollutant)

Show: Active and Pending Records

AQD Facility ID: 13300023

Facility Name: Agri-Energy LLC

Pollutant	Item	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
Sulfur Dioxide							
	GP 001	PER 007		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	SV 004	PER 007		4.000E-02	1.700E-01	1.700E-01	
	SV 004	PER 009		4.000E-02	1.700E-01	2.000E-01	
	SV 011	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 015	PER 008		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	SV 016	PER 008		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	SV 017	PER 008		0.000E+00	0.000E+00	0.000E+00	
Totals					7.900E-01	5.500E-01	0.000E+00
Volatile Organic Compounds							
	EU 018	PER 008		3.400E-01	1.480E+00	1.430E+00	
	EU 018	PER 009		3.400E-01	1.480E+00	1.430E+00	
	EU 029	PER 008		4.000E-02	1.800E-01	5.000E-02	
	EU 029	PER 009		4.000E-02	1.800E-01	5.000E-02	
	EU 033	PER 008		3.400E-01	1.480E+00	1.430E+00	
	EU 033	PER 009		3.400E-01	1.480E+00	1.430E+00	
	FS 003	PER 008		1.110E+00	8.900E+01	4.880E+00	
	FS 003	PER 009		1.110E+00	8.900E+01	4.880E+00	
	FS 005	PER 008		6.600E-01	2.870E+00	2.870E+00	2.800E+00
	FS 005	PER 009		6.600E-01	5.320E+00	5.320E+00	
	GP 001	PER 007		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	GP 001	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 003	PER 008		7.000E+00	6.000E+02	3.066E+01	3.000E+01
	SV 003	PER 009		7.000E+00	6.000E+02	3.066E+01	
	SV 004	PER 007		4.000E+00	1.752E+01	1.752E+01	
	SV 004	PER 009		4.000E+00	1.752E+01	1.752E+01	
	SV 005	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 005	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 006	PER 007		0.000E+00	0.000E+00	0.000E+00	
	SV 006	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 007	PER 007		0.000E+00	0.000E+00	0.000E+00	
	SV 007	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 008	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 008	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 009	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 009	PER 009		0.000E+00	0.000E+00	0.000E+00	

FACILITY DESCRIPTION: Potential-to-emit (by pollutant)

Show: Active and Pending Records
 AQD Facility ID: 13300023
 Facility Name: Agri-Energy LLC

Pollutant	Item	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
Volatile Organic Compounds							
	SV 010	PER 007		2.540E+00	1.111E+01	1.111E+01	3.500E+00
	SV 010	PER 009		2.540E+00	1.111E+01	1.111E+01	
	SV 011	PER 008		0.000E+00	0.000E+00	0.000E+00	
	SV 011	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 012	PER 008		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	SV 014	PER 008		1.200E+00	5.260E+00	5.260E+00	5.000E+00
	SV 014	PER 009		1.200E+00	5.260E+00	5.260E+00	
	SV 015	PER 008		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	SV 015	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 016	PER 008		0.000E+00	0.000E+00	0.000E+00	0.000E+00
	SV 016	PER 009		0.000E+00	0.000E+00	0.000E+00	
	SV 017	PER 008		0.000E+00	0.000E+00	0.000E+00	
	TK 006	PER 008		1.600E-01	7.100E-01	7.100E-01	
	TK 006	PER 009		1.600E-01	7.100E-01	7.100E-01	
	TK 007	PER 008		3.200E-01	1.400E+00	1.400E+00	
	TK 007	PER 009		3.200E-01	1.400E+00	1.400E+00	
	TK 008	PER 008		6.400E-01	2.810E+00	2.810E+00	
	TK 008	PER 009		6.400E-01	2.810E+00	2.810E+00	
	TK 009	PER 008		4.000E-02	1.600E-01	1.600E-01	
	TK 009	PER 009		4.000E-02	1.600E-01	1.600E-01	
	TK 010	PER 008		4.000E-02	1.600E-01	1.600E-01	
	TK 010	PER 009		4.000E-02	1.600E-01	1.600E-01	
	TK 011	PER 009		0.000E+00	0.000E+00	0.000E+00	
	TK 012	PER 009		0.000E+00	0.000E+00	0.000E+00	
Totals					7.366E+02	8.290E+01	0.000E+00

Attachment 2 - CD-01 forms



COMPLIANCE PLAN CD-01

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: Total Facility

	NC/CA	Type	Citation	Requirement
1.0		CD	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Applicability of 40 CFR 52.21 to greenhouse gases (GHG) if the Permittee cannot commence construction before July 1, 2011 and US EPA does not promulgate the deferral of biogenic emissions proposed in the Federal Register on March 21, 2011: The Permittee may avoid PSD by demonstrating, prior to commencing construction, that the increase in GHG, or the net increase in GHG, is less than 75,000 tons per year.
2.0		CD	hdr	PERMIT APPENDICES
3.0		CD	MR	This permit contains appendices as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in Appendix I for calculation of NOx emissions. Modeling parameters in Appendix II are included for reference only and compliance with these parameters is achieved through meeting the Modeling requirements on Page A-2 that reference Appendix II.
4.0		CD	hdr	OPERATIONAL REQUIREMENTS
5.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Carbon Dioxide Equivalent: less than or equal to 90,000 tons/year using 12-month Rolling Sum for nonbiogenic emissions due to combustion of natural gas and propane
6.0		CD	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Recordkeeping: Following the end of each calendar month, the Permittee shall record the natural gas used (in millions of cubic feet, MMscf) and the propane used (in gallons).
7.0		CD	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Recordkeeping: The Permittee shall calculate and record the CO ₂ e emitted from fuel combustion each month using the records above and the following equation: $CO_2e = \text{natural gas usage(MMScf)} * HHV(\text{MMBtu/MMScf}) * 0.059(\text{ton } CO_2e/\text{MMBtu}) + \text{propane usage(gallons)} * HHV(\text{MMBtu/gallon}) * 0.068(\text{ton } CO_2e/\text{MMBtu})$ The Permittee shall calculate and record the 12-month rolling sum of CO ₂ e.
8.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Production: less than or equal to 26000000 gallons/year using 12-month Rolling Sum of ethanol-equivalent (200 proof ethanol, prior to addition of denaturant).
9.0		CD	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 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 and isobutanol produced during the previous month and the gallons of ethanol-equivalent produced during the previous 12 months (12-month rolling sum). Ethanol-equivalent is calculated as follows: Ethanol-equivalent (gallons) = ethanol produced (gallons) + isobutanol produced (gallons) * 26/22
10.0		CD	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)	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.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

11.0		CD	Minn. R. 7007.0800, subp. 14 and 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. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.
12.0		CD	Minn. R. 7011.0020	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.
13.0		CD	Minn. R. 7007.0800, subp. 9(A)	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.
14.0		CD	Minn. R. 7011.0150	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.
15.0		CD	hdr	PERFORMANCE TESTING
16.0		CD	Minn. R. 7017.2030, subps. 1-4 and Minn. R. 7017.2035 subps. 1 and 2	Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.
17.0		CD	hdr	MONITORING REQUIREMENTS
18.0		CD	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).
19.0		CD	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.
20.0		CD	hdr	MODELING REQUIREMENTS FOR PM10
21.0		CD	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080	The parameters used in PM10 modeling for permit number 13300023-009 are listed in Appendix II of this permit.



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22.0		CD	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080	<p>Modeling Triggers: For changes that do not require a permit amendment or that require a minor permit amendment, and that affect any modeled parameter or emission rate documented in Appendix II, or an addition to the information documented in Appendix II, a Remodeling Submittal requirement is not triggered. The Permittee shall keep updated records on site of all parameters and emission rates. The Permittee shall submit any changes to parameters and emission rates with the next required remodeling submittal.</p> <p>For changes that require a moderate or major permit amendment and affect any modeled parameter or emission rate, a Remodeling Submittal requirement is triggered. The Permittee shall include previously made changes to parameters and emission rates that did not trigger a remodeling submittal with this modeling submittal.</p>
23.0		CD	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080	Remodeling Submittal: The Permittee must submit to the Commissioner for approval changes meeting the above criteria and must wait for a written approval (in the form of an issued permit amendment) before making such changes. The information submitted must include, for stack and vent sources, source emission rate, location, height, diameters, exit velocity, exit temperature, discharge direction, use of rain caps or rain hats, and, if applicable, locations and dimensions of nearby buildings. For non-stack/vent sources, this includes the source emission rate, location, size and shape, release height, and, if applicable, any emission rate scalars, and the initial lateral dimensions and initial vertical dimensions and adjacent building heights.
24.0		CD	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080, continued	Remodeling Submittal, continued: The plume dispersion characteristics due to the revisions of the information must be equivalent to or better than the dispersion characteristics modeled March 2011. The Permittee shall demonstrate this equivalency in the proposal. If the information does not demonstrate equivalent or better dispersion characteristics, or if a conclusion cannot readily be made about the dispersion, the Permittee must submit full remodeling.
25.0		CD	hdr	MODELING REQUIREMENTS FOR PM2.5
26.0		CD	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080	The parameters used in PM2.5 modeling for permit number 13300023-009 are listed in Appendix II of this permit.
27.0		CD	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080	<p>Modeling Triggers: For changes that do not require a permit amendment and affect any modeled parameter or emission rate documented in Appendix II, or are an addition to the information documented in Appendix II, a Remodeling Submittal requirement is not triggered at the time of the change. The Permittee shall keep updated records on site of all parameters and emission rates. The Permittee shall submit any changes to parameters and emission rates with the next required Remodeling Submittal.</p> <p>For changes that require a minor, moderate, or major permit amendment and affect any modeled parameter or emission rate documented in Appendix II, or are an addition to the information documented in Appendix II, a Remodeling Submittal requirement is triggered. The Permittee shall include previously made changes to parameters and emission rates that did not trigger a Remodeling Submittal.</p>
28.0		CD	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080	Remodeling Submittal: The Permittee must submit to the Commissioner for approval changes meeting the above criteria and must wait for a written approval before making such changes. For minor amendments, written approval of the modeling may be given before permit issuance; however, this approval applies only to the modeling and not to any other changes. The information submitted must include, for stack and vent sources, source emission rate, location, height, diameters, exit velocity, exit temperature, discharge direction, use of rain caps or rain hats, and, if applicable, locations and dimensions of nearby buildings. For non-stack/vent sources, this includes the source emission rate, location, size and shape, release height, and, if applicable, any emission rate scalars, and the initial lateral dimensions and initial vertical dimensions and adjacent building heights.



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29.0		CD	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. Stat. Section 116.07, subs. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subs. 1, 2 & 4; Minn. R. 7009.0010-7009.0080, continued	Remodeling Submittal, continued: The plume dispersion characteristics due to the revisions of the information must be equivalent to or better than the dispersion characteristics modeled in March 2011. The Permittee shall demonstrate this equivalency in the proposal. If the information does not demonstrate equivalent or better dispersion characteristics, or if a conclusion cannot readily be made about the dispersion, the Permittee must submit full remodeling.
30.0		CD	hdr	RECORDKEEPING
31.0		CD	Minn. R. 7007.0800, subp. 5(B)	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.
32.0		CD	Minn. R. 7007.0800, subp. 5(C)	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).
33.0		CD	Minn. R. 7007.1200, subp. 4	When the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. For nonexpiring permits, these records shall be kept for a period of five years from the date that the change was made. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format.
34.0		CD	hdr	REPORTING/SUBMITTALS
35.0		CD	Minn. R. 7019.1000, subp. 3	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.
36.0		CD	Minn. R. 7019.1000, subp. 2	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.
37.0		CD	Minn. R. 7019.1000, subp. 4	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.
38.0		CD	Minn. R. 7019.1000, subp. 1	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.
39.0		CD	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.
40.0		CD	Minn. R. 7007.1150 through Minn. R. 7007.1500	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.



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41.0		S/A	Minn. R. 7007.0800, subp. 6(C)(1)	Compliance Certification: due 30 days after end of each calendar year starting 09/04/1998 (for the previous calendar year). The Permittee shall submit this to the Commissioner on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year.
42.0		CD	Minn. R. 7019.3000 through Minn. R. 7019.3010	Emissions Inventory Report: due 91 days after end of each calendar year (April 1st). To be submitted on a form approved by the Commissioner.
43.0		CD	Minn. R. 7002.0005 through Minn. R. 7002.0095	Emission Fees: due 60 days after receipt of an MPCA bill.
44.0		S/A	Minn. R. 7007.0800, subp. 6(A)(2)	Semiannual Deviations Report: due 30 days after end of each calendar half-year starting 09/04/1998 The first report covers January 1 to June 30. The second report covers July 1 to December 31.
45.0		CD	Minn. R. 7007.1400, subp. 1(H)	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).
46.0		CD	40 CFR pt. 68	The Permittee is required to submit a Risk Management Plan (RMP) under the federal rule, 40 CFR pt. 68. Each owner or operator of a stationary source, at which a regulated substance is present above a threshold quantity in a process, shall design and implement an accidental release prevention program. A complete RMP must be submitted to the RMP Reporting Center, PO Box 3346, Merrifield, VA 22116. RMP submittal information may be obtained at http://www.epa.gov/swercepp or by calling 1-800-424-9346. These requirements must be complied with no later than the latest of the following dates: (1) June 21, 1999; (2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or (3) The date on which a regulated substance is first present above a threshold quantity in a process.



COMPLIANCE PLAN CD-01

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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)

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	Requirements moved to CE001 and CE002



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: GP 003 Scrubber Monitoring Requirements

Associated Items: CE 003 Packed-Gas Adsorption Column

CE 005 Packed-Gas Adsorption Column

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	Requirements moved to CE003 and CE005



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: GP 004 Cyclone Monitoring Requirements

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

EU 024 Cooling Cyclone

	NC/CA	Type	Citation	Requirement
1.0		LIMIT	Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Operate and maintain the multiclone to achieve a collection efficiency for Total Particulate Matter: greater than or equal to 90 percent collection efficiency
2.0		CD	Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Pressure Drop: greater than or equal to 0.5 inch of water column and less than or equal to 5.5 inches of water column, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours when in operation.
3.0		CD	Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Record pressure drop at each cyclone once each day of operation.
4.0		CD	Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 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 the pressure drop is not within the range of values specified in this permit, 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.
5.0		CD	Minn. R. 7007.0800, subp. 2 and 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.
6.0		CD	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.
7.0		CD	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.



COMPLIANCE PLAN CD-01

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: GP 005 Storage Tanks Subject to NSPS Kb Records Only

Associated Items: TK 006 Isobutanol or Ethanol, 95%

TK 007 Isobutanol or Ethanol, 100%

	NC/ CA	Type	Citation	Requirement
1.0		CD	40 CFR Section 60.116b(b); Minn. R. 7011.1520 (C)	Recordkeeping: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity.
2.0		CD	40 CFR Section 60.116b(c); 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.
3.0		CD	40 CFR Section 60.116b(d), Minn. R. 7011.1520 (C)	Notification: Notify the Administrator within 30 days when the maximum true vapor pressure exceeds 5.2 kPa.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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

Associated Items: TK 009 Isobutanol or Ethanol, 95% with Unleaded Gas, 5%

TK 010 Isobutanol or Ethanol, 95% with Unleaded Gas, 5%

	NC/CA	Type	Citation	Requirement
1.0		CD	hdr	A. POLLUTION CONTROL REQUIREMENTS
2.0		CD	40 CFR Section 60.112b(a); Minn. R. 7011.1520 (C)	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.
3.0		CD	40 CFR Section 60.112b(a)(1)(ii)(B); 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.
4.0		CD	hdr	B. MONITORING REQUIREMENTS
5.0		CD	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, 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.
6.0		CD	40 CFR Section 60.113b(a)(3)(ii); 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.
7.0		CD	40 CFR Section 60.113b(a)(3)(i); 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 10 years.
8.0		CD	hdr	C. RECORDKEEPING REQUIREMENTS
9.0		CD	40 CFR Section 60.116b(b); Minn. R. 7011.1520 (C)	Recordkeeping: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity.
10.0		CD	40 CFR Section 60.115b(a)(2); 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).
11.0		CD	40 CFR Section 60.116b(c); 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.
12.0		CD	hdr	D. REPORTING REQUIREMENTS
13.0		CD	40 CFR Section 60.115b(a)(4); Minn. R. 7011.1520 (C)	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.
14.0		CD	40 CFR Section 60.113b(a)(5); 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.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: GP 008 Boilers

Associated Items: EU 018 Boiler No. 1

EU 033 Boiler No. 2

	NC/CA	Type	Citation	Requirement
1.0		CD	40 CFR Section 60.48c(g)(2) and (i); Minn. R. 7011.0570	Recordkeeping: Record and maintain records of the amount of each fuel combusted in boiler no. 1 (EU018) and boiler No. 2 (EU033) on a monthly basis. These records may consist of purchase records or receipts. Additional requirements for propane follow.
2.0		CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2	Fuel Burned: Natural gas and propane only.
3.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200	Operating Hours: less than or equal to 1000 hours/year using 12-month Rolling Sum with propane as fuel. This limit applies individually to each boiler in GP008.
4.0		CD	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 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 number of hours the boiler was operated with propane fuel during the month.
5.0		CD	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 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 boiler has operated with propane fuel during the previous month and during the previous 12 months (12-month rolling sum).



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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
 - EU 031 bushel corn bin
 - EU 036 Grain bin
 - GP 002 Baghouse Monitoring Requirements

	NC/CA	Type	Citation	Requirement
1.0		CD	hdr	A. EMISSION LIMITS
2.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; most stringent, meets limit required by Minn. R. 7011.1005	Total Particulate Matter: less than or equal to 0.37 lbs/hour using 3-hour Average
3.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200.	PM < 10 micron: less than or equal to 0.37 lbs/hour using 3-hour Average
4.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200.	PM < 2.5 micron: less than or equal to 0.37 lbs/hour using 3-hour Average
5.0		LIMIT	Minn. R. 7011.1005, subp. 3(D)	Opacity: less than or equal to 10 percent opacity
6.0		CD	hdr	B. POLLUTION CONTROL AND PERIODIC MONITORING REQUIREMENTS See CE001
7.0		S/A	Minn. R. 7007.0800, subp. 5	Notification: due 15 days after Equipment Installation notify the Commissioner that the height of SV001 has been increased to 60 feet.



COMPLIANCE PLAN CD-01

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: SV 002 Hammermill (CE 002)

Associated Items: EU 008 Hammermill/Belt Scale

EU 045 Hammermill/Belt Scale

GP 002 Baghouse Monitoring Requirements

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	REPLACEMENT OF HAMMERMILL Permit action 009 authorizes the hammermill included in EU008 to be replaced with a new hammermill. EU045 identifies the new hammermill/weigh belt unit.
2.0		CD	hdr	A. EMISSION LIMITS
3.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; most stringent, meets limit required by Minn. R. 7011.1005	Total Particulate Matter: less than or equal to 0.22 lbs/hour using 3-hour Average
4.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	PM < 10 micron: less than or equal to 0.22 lbs/hour using 3-hour Average
5.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	PM < 2.5 micron: less than or equal to 0.22 lbs/hour using 3-hour Average
6.0		LIMIT	Minn. R. 7011.1005, subp. 3(D)	Opacity: less than or equal to 10 percent opacity
7.0		CD	hdr	B. POLLUTION CONTROL AND PERIODIC MONITOING REQUIREMENTS See CE002



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: SV 003 Fermentation scrubber (CE 003)

- Associated Items:**
- EU 025 Fermenter
 - EU 026 Fermenter
 - EU 027 Fermenter
 - EU 028 Beer Well
 - EU 035 Fermenter #4
 - EU 037 Isobutanol unit 37
 - EU 038 Isobutanol unit 38
 - EU 039 Isobutanol unit 39
 - EU 040 Isobutanol unit 40
 - EU 041 Isobutanol unit 41
 - EU 042 Isobutanol unit 42
 - EU 043 Isobutanol unit 43
 - EU 046 Isobutanol unit 46
 - EU 047 Isobutanol unit 47
 - EU 048 Isobutanol unit 48
 - EU 049 Isobutanol unit 49

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	CE003 routed to CE007 After issuance of permit 009, the exhaust gases from CE003 will normally be routed to CE007 (thermal oxidizer) and exhaust through SV004. Exhaust from CE003 may also be vented through SV003 when CE007 is not operating.
2.0		CD	hdr	A. EMISSION LIMITS
3.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Volatile Organic Compounds: less than or equal to 7.0 lbs/hour as total mass of VOC
4.0		LIMIT	Minn. R. 7011.0715, subp. 1(B)	Opacity: less than or equal to 20 percent opacity
5.0		CD	hdr	B. POLLUTION CONTROL AND PERIODIC MONITORING REQUIREMENTS See CE003
6.0		CD	hdr	C. TESTING REQUIREMENTS
7.0		CD	Minn. R. 7017.2020, subp. 1	None required since emissions will normally vent through CE007 and SV004. Tests will be conducted at SV004.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: SV 004 Thermal Oxidizer (CE007)

- Associated Items:**
- EU 009 Beer Stripper
 - EU 010 Rectifier
 - EU 011 Side Stripper
 - EU 012 Molecular Sieve
 - EU 014 Evaporator
 - EU 015 DDGS Dryer/Burner
 - EU 025 Fermenter
 - EU 026 Fermenter
 - EU 027 Fermenter
 - EU 028 Beer Well
 - EU 034 Regenerative Thermal Oxidizer
 - EU 035 Fermenter #4
 - EU 037 Isobutanol unit 37
 - EU 038 Isobutanol unit 38
 - EU 039 Isobutanol unit 39
 - EU 040 Isobutanol unit 40
 - EU 041 Isobutanol unit 41
 - EU 042 Isobutanol unit 42
 - EU 043 Isobutanol unit 43
 - EU 044 Isobutanol unit 44
 - EU 046 Isobutanol unit 46
 - EU 047 Isobutanol unit 47
 - EU 048 Isobutanol unit 48
 - EU 049 Isobutanol unit 49

	NC/CA	Type	Citation	Requirement
1.0		CD	hdr	<p>MODIFICATION AUTHORIZED BY PERMIT ACTION 009</p> <p>After issuance of permit 009, the exhaust from CE003 and CE005 will normally be routed to CE007 (thermal oxidizer) and exhaust through SV004. When the thermal oxidizer is not operating, exhaust from CE003 and CE005 will be through SV003 and SV010.</p>
2.0		CD	hdr	A. EMISSION LIMITS
3.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; most stringent, meets limit required by Minn. R. 7011.0610, subp. 1(A)(1)	Total Particulate Matter: less than or equal to 5.0 lbs/hour using 3-hour Average
4.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	PM < 10 micron: less than or equal to 5.0 lbs/hour using 3-hour Average



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

5.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	PM < 2.5 micron: less than or equal to 5.0 lbs/hour using 3-hour Average
6.0		LIMIT	Minn. R. 7011.0610, subp. 1(A)(2)	Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. This opacity limit is met by maintaining the thermal oxidizer temperature as specified under CE007. Monitoring for this opacity limit consists of the continuous temperature monitoring required for the thermal oxidizer (CE007, EU034).
7.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Volatile Organic Compounds: less than or equal to 4.0 lbs/hour as total mass of VOC
8.0		CD	hdr	B. POLLUTION CONTROL REQUIREMENTS See GP004 and CE007
9.0		CD	hdr	C. TESTING REQUIREMENTS
10.0		S/A	Minn. R. 7017.2020, subp. 1	Performance Test: due before end of each 60 months starting 01/04/2007 to measure emission of total particulate matter
11.0		S/A	Minn. R. 7017.2020, subp. 1	Performance Test: due before end of each 60 months starting 01/04/2007 to measure emission of particulate matter smaller than 10 microns (PM10)
12.0		S/A	Minn. R. 7017.2020, subp. 1	Performance Test: due before end of each 36 months starting 01/04/2007 to measure emission of VOC
13.0		S/A	Minn. R. 7017.2020, subp. 1	Performance Test: due before end of each 36 months starting 01/04/2007 to measure VOC destruction efficiency
14.0		CD	hdr	D. EMISSION UNIT OPERATION (EU 015)
15.0		LIMIT	Minn. R. 7017.2025	Process Throughput: less than or equal to 21,500 lbs/hour using 24-hour Block Average of dryer solids. This limit is applicable to the DDGS dryer (EU 015). Downtime of 15 or more minutes is not to be counted as operating time. This process throughput limit may not be exceeded unless a new limit is established pursuant to Minn. R. 7017.2025, subp. 3, based on the throughput during the most recent MPCA approved performance test where compliance with an emission limit for EU 015 is demonstrated.
16.0		CD	Minn. R. 7007.0800, subp. 5	Recordkeeping of Throughput (EU 015): Each day, record the corn processed for the previous day, in pounds per day. Compute the DDGS produced as follows: DDGS = corn processed (bushels) * 18 (lb DDGS/bushel) Divide the total amount of DDGS produced by the hours of dryer operating time. Do not count downtime of 15 minutes or more as operating time.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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
 - EU 044 Isobutanol unit 44

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	CE005 routed to CE007 After issuance of permit 009, the exhaust gases from CE005 will normally be routed to CE007 (thermal oxidizer) and exhaust through SV004. Exhaust from CE005 may also be vented through SV010 when CE007 is not operating.
2.0		CD	hdr	A. EMISSION LIMITS
3.0		LIMIT	Minn. R. 7011.0715, subp. 1(B)	Opacity: less than or equal to 20 percent opacity
4.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Volatile Organic Compounds: less than or equal to 2.54 lbs/hour as total mass of VOC
5.0		CD	hdr	B. POLLUTION CONTROL AND PERIODIC MONITORING REQUIREMENTS See CE005
6.0		CD	hdr	C. TESTING REQUIREMENTS
7.0		S/A	Minn. R. 7017.2020, subp. 1	Performance Test: due before end of each 60 months starting 02/16/2005 to measure emission of VOC



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: SV 014 Cooling cyclone

Associated Items: EU 024 Cooling Cyclone

	NC/CA	Type	Citation	Requirement
1.0		CD	hdr	A. EMISSION LIMITS
2.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; most stringent, meets limit required by Minn. R. 7011.0610, subp. 1(A)(1)	Total Particulate Matter: less than or equal to 0.80 lbs/hour using 3-hour Average
3.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	PM < 10 micron: less than or equal to 0.80 lbs/hour using 3-hour Average
4.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	PM < 2.5 micron: less than or equal to 0.12 lbs/hour using 3-hour Average
5.0		LIMIT	Minn. R. 7011.0610, subp. 1(A)(2)	Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.
6.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Volatile Organic Compounds: less than or equal to 1.2 lbs/hour as total mass of VOC
7.0		CD	hdr	B. TESTING REQUIREMENTS
8.0		S/A	Minn. R. 7017.2020, subp. 1	Performance Test: due before end of each 60 months starting 02/19/2004 to measure emission of total particulate matter
9.0		S/A	Minn. R. 7017.2020, subp. 1	Performance Test: due before end of each 60 months starting 02/19/2004 to measure emission of particulate matter smaller than 10 microns (PM10)



COMPLIANCE PLAN CD-01

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: SV 016 Flare

Associated Items: EU 030 Bio-Digester Flare

	NC/ CA	Type	Citation	Requirement
1.0		LIMIT	Minn. R. 7011.0715, subp. 1(B)	Opacity: less than or equal to 20 percent opacity
2.0		CD	Minn. R. 7007.0800, subp. 4(D)	Monitoring: Each operating day, observe and record the presence or absence of visible emissions from the flare. Absence of visible emissions is an indicator of opacity less than 20 %.
3.0		CD	Minn. R. 7007.0800, subps. 4, 5, and 14	Corrective Actions: If visible emissions are observed or if the flare or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall eliminate the visible emissions and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: EU 029 Grain Dryer

Associated Items: SV 015 Grain Dryer

	NC/CA	Type	Citation	Requirement
1.0		CD	hdr	A. EMISSION LIMITS
2.0		LIMIT	Minn. R. 7011.0610, subp. 1(A)(1)	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.
3.0		LIMIT	Minn. R. 7011.0610, subp. 1(A)(2)	Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.
4.0		CD	hdr	B. POLLUTION CONTROL REQUIREMENTS
5.0		CD	Minn. R. 7011.1005, subp. 5(A)	The perforations of a column dryer screen must not exceed 3/32 inches in diameter.
6.0		CD	hdr	C. OPERATING REQUIREMENTS
7.0		CD	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. ch. 7009	Operating Hours: From December 1 to February 29, the dryer may operate only between 5 am and 7 pm each day. Dryer operation is prohibited from March 1 to August 31. From September 1 to November 30, the dryer may operate 24 hours per day.
8.0		CD	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Recordkeeping: Daily record the startup and shutdown time of the dryer, or that the dryer did not operate, or operated 24 hours if allowed by this permit.
9.0		CD	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2	Fuel Burned - Natural gas only



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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

- 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
 - EU 031 bushel corn bin
 - EU 036 Grain bin
 - GP 002 Baghouse Monitoring Requirements

	NC/CA	Type	Citation	Requirement
1.0		CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment.
2.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for Total Particulate Matter: greater than or equal to 99.3 percent collection efficiency
3.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 10 micron: greater than or equal to 98.2 percent collection efficiency
4.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 2.5 micron: greater than or equal to 92.6 percent collection efficiency



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

5.0	LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14	Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column
6.0	CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	Visible Emissions: The Permittee shall check each fabric filter stack for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation.
7.0	CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit.
8.0	CD	Minn. R. 7007.0800, subp. 4	Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.
9.0	CD	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).
10.0	CD	Minn. R. 7007.0800, subp. 4, 5, and 14	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.
11.0	CD	Minn. R. 7007.0800, subp. 4, 5, and 14	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.
12.0	CD	Minn. R. 7007.0800, subp. 14	The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: CE 002 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

Associated Items: EU 008 Hammermill/Belt Scale

EU 045 Hammermill/Belt Scale

GP 002 Baghouse Monitoring Requirements

	NC/CA	Type	Citation	Requirement
1.0		CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment.
2.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for Total Particulate Matter: greater than or equal to 99 percent collection efficiency
3.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 10 micron: greater than or equal to 93 percent collection efficiency
4.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 2.5 micron: greater than or equal to 93 percent collection efficiency
5.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14	Pressure Drop: greater than or equal to 1.0 inches of water column and less than or equal to 4.0 inches of water column
6.0		CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	Visible Emissions: The Permittee shall check each fabric filter stack for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation.
7.0		CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

8.0		CD	Minn. R. 7007.0800, subp. 4	Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.
9.0		CD	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).
10.0		CD	Minn. R. 7007.0800, subp. 4, 5, and 14	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.
11.0		CD	Minn. R. 7007.0800, subp. 4, 5, and 14	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.
12.0		CD	Minn. R. 7007.0800, subp. 14	The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: CE 003 Packed-Gas Adsorption Column

- Associated Items:**
- EU 025 Fermenter
 - EU 026 Fermenter
 - EU 027 Fermenter
 - EU 028 Beer Well
 - EU 035 Fermenter #4
 - EU 037 Isobutanol unit 37
 - EU 038 Isobutanol unit 38
 - EU 039 Isobutanol unit 39
 - EU 040 Isobutanol unit 40
 - EU 041 Isobutanol unit 41
 - EU 042 Isobutanol unit 42
 - EU 043 Isobutanol unit 43
 - EU 046 Isobutanol unit 46
 - EU 047 Isobutanol unit 47
 - EU 048 Isobutanol unit 48
 - EU 049 Isobutanol unit 49
 - GP 003 Scrubber Monitoring Requirements

	NC/CA	Type	Citation	Requirement
1.0		CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain each scrubber at all times that any emission unit controlled by the scrubber is in operation. The Permittee shall document periods of non-operation of the control equipment.
2.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Volatile Organic Compounds: greater than or equal to 95 percent collection efficiency
3.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Water flow rate: greater than or equal to 23.3 gallons/minute if emissions are vented to the atmosphere
4.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Water flow rate: greater than or equal to 10 gallons/minute if emissions are vented to the thermal oxidizer, CE007
5.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 15 inches of water column



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

6.0	CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	Flowrate and Pressure Drop: Once each operating day the Permittee shall observe and record the scrubbing liquid flowrate and the pressure drop across the scrubber.
7.0	CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	Recordkeeping of Flowrate and Pressure Drop. The Permittee shall record the time and date of each flowrate reading and pressure drop reading, and whether or not the observed flowrate and pressure drop was within the range specified in this permit.
8.0	CD	Minn. R. 7007.0800, subp. 4	Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording flowrate and pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when each monitored scrubber is in operation.
9.0	CD	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).
10.0	CD	Minn. R. 7007.0800, subp. 4, 5, and 14	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the scrubber or any of its components are found during the inspections to need repair. Corrective actions shall return the flowrate or pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken.
11.0	CD	Minn. R. 7007.0800, subp. 4, 5, and 14	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.
12.0	CD	Minn. R. 7007.0800, subp. 14	The Permittee shall operate and maintain each packed gas absorption column in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

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

Associated Items: EU 015 DDGS Dryer/Burner

GP 004 Cyclone Monitoring Requirements

	NC/ CA	Type	Citation	Requirement
1.0		CD	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).



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: CE 005 Packed-Gas Adsorption Column

- Associated Items:**
- EU 009 Beer Stripper
 - EU 010 Rectifier
 - EU 011 Side Stripper
 - EU 012 Molecular Sieve
 - EU 014 Evaporator
 - EU 044 Isobutanol unit 44
 - GP 003 Scrubber Monitoring Requirements
 - TK 001 Corn Mash (Slurry Tank)
 - TK 004 Corn Mash (Yeast Tank)
 - TK 005 Production Rundown Tank - ethanol or isobutanol

	NC/CA	Type	Citation	Requirement
1.0		CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain each scrubber at all times that any emission unit controlled by the scrubber is in operation. The Permittee shall document periods of non-operation of the control equipment.
2.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Volatile Organic Compounds: greater than or equal to 95 percent collection efficiency
3.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Water flow rate: greater than or equal to 3.6 gallons/minute
4.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Pressure Drop: greater than or equal to 1.0 inches of water column and less than or equal to 10 inches of water column
5.0		CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	Flowrate and Pressure Drop: Once each operating day the Permittee shall observe and record the scrubbing liquid flowrate and the pressure drop across the scrubber.
6.0		CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200, Minn. R. 7007.0800, subps. 2 and 14	Recordkeeping of Flowrate and Pressure Drop. The Permittee shall record the time and date of each flowrate reading and pressure drop reading, and whether or not the observed flowrate and pressure drop was within the range specified in this permit.



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7.0		CD	Minn. R. 7007.0800, subp. 4	Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording flowrate and pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when each monitored scrubber is in operation.
8.0		CD	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).
9.0		CD	Minn. R. 7007.0800, subp. 4, 5, and 14	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the scrubber or any of its components are found during the inspections to need repair. Corrective actions shall return the flowrate or pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken.
10.0		CD	Minn. R. 7007.0800, subp. 4, 5, and 14	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.
11.0		CD	Minn. R. 7007.0800, subp. 14	The Permittee shall operate and maintain each packed gas absorption column in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: CE 007 Thermal Oxidizer

- Associated Items:**
- EU 009 Beer Stripper
 - EU 010 Rectifier
 - EU 011 Side Stripper
 - EU 012 Molecular Sieve
 - EU 014 Evaporator
 - EU 015 DDGS Dryer/Burner
 - EU 025 Fermenter
 - EU 026 Fermenter
 - EU 027 Fermenter
 - EU 028 Beer Well
 - EU 034 Regenerative Thermal Oxidizer
 - EU 035 Fermenter #4
 - EU 037 Isobutanol unit 37
 - EU 038 Isobutanol unit 38
 - EU 039 Isobutanol unit 39
 - EU 040 Isobutanol unit 40
 - EU 041 Isobutanol unit 41
 - EU 042 Isobutanol unit 42
 - EU 043 Isobutanol unit 43
 - EU 044 Isobutanol unit 44
 - EU 046 Isobutanol unit 46
 - EU 047 Isobutanol unit 47
 - EU 048 Isobutanol unit 48
 - EU 049 Isobutanol unit 49

	NC/CA	Type	Citation	Requirement
1.0		CD	hdr	<p>MODIFICATION AUTHORIZED BY PERMIT ACTION 009</p> <p>After issuance of permit 009, the exhaust from CE003 and CE005 will be routed to CE007 (thermal oxidizer) and exhaust through SV004. CE003 and CE005 will continue to be operated as a scrubbers subject to conditions found at CE003 and CE005. When the thermal oxidizer is not operating, CE003 and CE005 will exhaust through SV003 and SV010 respectively.</p>
2.0		CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the thermal oxidizer any time that the DDGS dryer (EU015) is in operation.
3.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the thermal oxidizer so that it achieves a destruction efficiency for Volatile Organic Compounds: greater than or equal to 95 percent destruction efficiency



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

4.0	LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14	The permittee shall operate and maintain the thermal oxidizer so that it achieves a destruction efficiency for Total Particulate Matter: greater than or equal to 82.1 percent destruction efficiency
5.0	LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14	Temperature: greater than or equal to 1565 degrees F as a 3-hour rolling average at the combustion chamber outlet, unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new limit shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The limit is final upon issuance of a permit amendment incorporating the change. If the 3-hour rolling average temperature is below the minimum temperature limit, the VOC used during that time shall be considered uncontrolled until the average temperature is above the minimum temperature limit. This shall be reported as a deviation.
6.0	CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall maintain a continuous hard copy readout or computer disk file of the temperature readings and calculated three hour rolling average temperatures for the combustion chamber.
7.0	CD	Minn. R. 7007.0800, subp. 4 and 5	Daily Monitoring: The Permittee shall physically check the temperature recording device at least once each operating day to verify that it is working and recording properly, and maintain a written or computer log of these daily checks.
8.0	CD	Minn. R. 7007.0800, subp. 4	Monitoring Equipment: The Permittee shall install and maintain thermocouples to conduct temperature monitoring required by this permit. The monitoring equipment must be installed, in use, and properly maintained whenever operation of the monitored control equipment is required.
9.0	CD	Minn. R. 7007.0800, subp. 4 and 5	Thermocouple Monitoring: The Permittee shall maintain and operate a thermocouple monitoring device that continuously indicates and records the combustion chamber temperature of the thermal oxidizer. The monitoring device shall have a margin of error less than the greater of +/- 0.75 percent of the temperature being measured or +/- 2.5 degrees Celsius. The recording device shall also calculate the three-hour rolling average combustion chamber temperature.
10.0	CD	Minn. R. 7007.0800, subp. 4, 5 and 14	Annual Inspections: At least annually, the Permittee shall inspect the control equipment internal and external system components, including but not limited to the refractory, heat exchanger, and electrical systems. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.
11.0	CD	Minn. R. 7007.0800, subp. 4, 5, and 14	Annual Calibration: The Permittee shall calibrate the temperature monitor at least annually and shall maintain a written record of the calibration and any action resulting from the calibration.
12.0	CD	Minn. R. 7007.0800, subp. 4, 5 and 14	Corrective Actions: If the temperature is below the minimum specified by this permit or if the thermal oxidizer or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall return the temperature to at least the permitted minimum and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the thermal oxidizer. The Permittee shall keep a record of the type and date of any corrective action taken.
13.0	CD	Minn. R. 7007.0800, subp. 4 and 5	Recordkeeping: Record and maintain records of the amount of each fuel combusted in the thermal oxidizer (CE 007, EU034) on a monthly basis. These records may consist of purchase records or receipts.
14.0	CD	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2	Fuel Burned: Natural gas and propane only.



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15.0	LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; To avoid classification as major source under 40 CFR Section 70.2 and Minn. R. 7007.0200	Operating Hours: less than or equal to 1000 hours/year using 12-month Rolling Sum with propane as fuel.
16.0	CD	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 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 number of hours CE007 was operated with propane fuel during the month.
17.0	CD	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 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 CE007 has operated with propane fuel during the previous month and during the previous 12 months (12-month rolling sum).
18.0	LIMIT	Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200	Operate and maintain the multiclone to achieve a collection efficiency for Total Particulate Matter: greater than or equal to 90 percent collection efficiency



COMPLIANCE PLAN CD-01

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: FS 001 Truck Traffic

	NC/ CA	Type	Citation	Requirement
1.0		CD	Minn. R. 7011.0150	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.
2.0		CD	Minn. R. ch. 7009	Truck Traffic - Daily Limits: Grain Receiving: less than or equal to 180 trucks/day total Grain Receiving: less than or equal to 30 straight trucks/day DDGS/wetcake loadout: less than or equal to 35 trucks/day Denatured Ethanol Loadout: less than or equal to 35 trucks/day Denaturant delivery: less than or equal to 5 trucks/day
3.0		CD	Minn. R. ch. 7009	Recordkeeping: The Permittee shall record the total number of each type of truck and tractor described above entering the facility each calendar day and keep these records on-site. Total trucks includes grain receiving (hopper + straight trucks/wagons), DDGS/wetcake loadout, ethanol loadout and denaturant delivery.
4.0		CD	Minn. R. ch. 7009	Haul Roads- All roads will be paved. Roads will be swept weekly unless covered in water, ice, or snow, in which case they will be swept the next day not covered with water, ice, or snow. The Permittee shall prevent track-out of dirt onto the facility roadways. The Permittee shall use only salt and not sand for wintertime ice abatement.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: FS 002 Grain Handling

	NC/ CA	Type	Citation	Requirement
1.0		CD	Minn. R. 7011.1005, subp. 1(A)	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).
2.0		LIMIT	Minn. R. 7011.1005, subp. 3(A)	Opacity: less than or equal to 5 percent opacity for fugitive emissions from truck unloading of grain or grain handling activities.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: FS 004 DDGS Handling

	NC/ CA	Type	Citation	Requirement
1.0		CD	Minn. R. 7011.1005, subp. 1(A)	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).
2.0		LIMIT	Minn. R. 7011.1005, subp. 3(A)	Opacity: less than or equal to 5 percent opacity for fugitive emissions from railcar loading of DDGS or DDGS handling activities.
3.0		LIMIT	Minn. R. 7011.1005, subp. 3(B)	Opacity: less than or equal to 10 percent opacity for fugitive emissions from DDGS truck loading.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

Subject Item: FS 005 Tank Valve, Flange, Seal Leaks

	NC/CA	Type	Citation	Requirement
1.0		CD	hdr	A. STANDARDS: PUMPS
2.0		CD	40 CFR Section 60.482-2 Minn. R. 7011.2900, subp. A	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 provided 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
3.0		CD	40 CFR Section 60.482-2(b) and (c) Minn. R. 7011.2900, subp. A	(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.
4.0		CD	hdr	B. STANDARDS: COMPRESSORS
5.0		CD	40 CFR Section 60.482-3(a) Minn. R. 7011.2900, subp. A	(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).
6.0		CD	40 CFR Section 60.482-3(b) Minn. R. 7011.2900, subp. 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.
7.0		CD	40 CFR Section 60.482-3(c) and (d) Minn. R. 7011.2900, subp. A	(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 system, or both.
8.0		CD	40 CFR Section 60.482-3(e) Minn. R. 7011.2900, subp. A	(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.
9.0		CD	40 CFR Section 60.482-3(f) Minn. R. 7011.2900, subp. A	(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.
10.0		CD	40 CFR Section 60.482-3(g) Minn. R. 7011.2900, subp. A	(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 provided 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.
11.0		CD	hdr	C. STANDARDS: PRESSURE RELIEF DEVICES IN GAS/VAPOR SERVICE
12.0		CD	40 CFR Section 60.482-4(a) Minn. R. 7011.2900, subp. A	(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).



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13.0		CD	40 CFR Section 60.482-4(b) Minn. R. 7011.2900, subp. 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 condition 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).
14.0		CD	hdr	D. STANDARDS: SAMPLING CONNECTION SYSTEMS
15.0		CD	40 CFR Section 60.482-5(a) Minn. R. 7011.2900, subp. A	(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).
16.0		CD	40 CFR Section 60.482-5(b) and (c) Minn. R. 7011.2900, subp. 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.
17.0		CD	hdr	E. STANDARDS: OPEN ENDED VALVES OR LINES
18.0		CD	40 CFR Section 60.482-6(a) Minn. R. 7011.2900, subp. A	(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.
19.0		CD	40 CFR 60.482-6(b) and (c) Minn. R. 7011.2900, subp. 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.
20.0		CD	hdr	F. STANDARDS: VALVES
21.0		CD	40 CFR Section 60.482-7(a) Minn. R. 7011.2900, subp. A	(a) Each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b).
22.0		CD	40 CFR Section 60.482-7(b) and (c) Minn. R. 7011.2900, subp. 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.
23.0		CD	40 CFR Section 60.482-7(d) Minn. R. 7011.2900, subp. A	(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 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.
24.0		CD	40 CFR Section 60.482-7(e) Minn. R. 7011.2900, subp. A	(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
25.0		CD	hdr	G. STANDARDS: PUMPS AND VALVES IN HEAVY LIQUID SERVICE, PRESSURE RELIEF DEVICES IN LIGHT LIQUID OR HEAVY LIQUID SERVICE, AND FLANGES AND OTHER CONNECTORS.
26.0		CD	40 CFR Section 60.482-8(a) Minn. R. 7011.2900, subp. A	(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.



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27.0		CD	40 CFR Section 60.482-8(b) and (c) Minn. R. 7011.2900, subp. 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 practicable, 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.
28.0		CD	40 CFR Section 60.482-8(d) Minn. R. 7011.2900, subp. A	(d) First attempts at repair include, but are not limited to, the best practices described under 40 CFR 60.482-7(e).
29.0		CD	hdr	H. DELAY OF REPAIR
30.0		CD	40 CFR Section 60.482-9(a) and (b) Minn. R. 7011.2900, subp. A	(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.
31.0		CD	40 CFR Section 60.482-9(c) Minn. R. 7011.2900, subp. A	(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.
32.0		CD	40 CFR Section 60.482-9(d) Minn. R. 7011.2900, subp. A	(d) Delay of repair for pumps will be allowed if: (1) Repair requires 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.
33.0		CD	40 CFR Section 60.482-9(e) Minn. R. 7011.2900, subp. A	(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.
34.0		CD	hdr	I. TESTING PROCEDURES
35.0		CD	40 CFR Section 60.485 Minn. R. 7011.2900, subp. A	Compliance shall be determined by the methods specified in 40 CFR 60.485.
36.0		CD	hdr	J. RECORDKEEPING
37.0		CD	40 CFR Section 60.486(b) Minn. R. 7011.2900, subp. A	(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.
38.0		CD	40 CFR Section 60.486(c)(1) - (4) Minn. R. 7011.2900, subp. A	(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.



COMPLIANCE PLAN **CD-01**

Facility Name: Agri-Energy LLC

Permit Number: 13300023 - 009

39.0		CD	40 CFR Section 60.486(c)(5) - (9) Minn. R. 7011.2900, subp. A	(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.
40.0		CD	hdr	K. REPORTING REQUIREMENTS
41.0		CD	40 CFR Section 60.487(a) Minn. R. 7011.2900, subp. A	(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.
42.0		CD	40 CFR Section 60.487(b) Minn. R. 7011.2900, subp. A	(b) The initial semiannual report to the Administrator 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
43.0		CD	40 CFR Section 60.487(c)(1) and (2)(i) - (2)(iv) Minn. R. 7011.2900, subp. A	(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),
44.0		CD	40 CFR Section 60.487(c)(v) - (vii) Minn. R. 7011.2900, subp. A	(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.
45.0		CD	40 CFR Section 60.487(c)(3) and (4) Minn. R. 7011.2900, subp. A	(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 occurred since the initial report or subsequent revisions to the initial report.
46.0		CD	40 CFR Section 60.487(e) Minn. R. 7011.2900, subp. A	(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 initial performance tests at least 30 days before the initial performance tests.

Attachment 3 - Points Calculator

Points-Based Fee Calculator

1) AQ Facility ID No.:	13300023
2) Facility Name:	Gevo/Agir-Energy
3) Small business? y/n?	--
4) DQ Numbers (including all rolled) :	3322 3074 3118
5) Date of each Application Received:	--
6) Final Permit No.	13300023-009
7) Permit Staff	Dave Beil
8) "Work completed" in which .xls file (i.e. unit 2b, unit 1a, biofuels)?	No

Total Points 67

Application Type	Initial		Secondary		Points	Total Points	Details
	DQ No.	Qty.	DQ No.	Qty.			
Administrative Amendment					1	0	
Minor Amendment					4	0	
Applicability Request					10	0	
Moderate Amendment					15	0	
Major Amendment	3322	1	3118	1	25	50	
Individual State Permit (not reissuance)					50	0	
Individual Part 70 Permit (not reissuance)					75	0	
Additional Points							
Modeling Review	1	1			15	15	
BACT Review					15	0	
LAER Review					15	0	
CAIR/Part 75 CEM analysis					10	0	
NSPS Review					10	0	
NESHAP Review					10	0	
Case-by-case MACT Review					20	0	
Netting					10	0	
Limits to remain below threshold					10	0	
Plantwide Applicability Limit (PAL)					20	0	
AERA review					15	0	
Variance request under 7000.7000					35	0	
Confidentiality request under 7000.1300	1	1			2	2	
FAW review							
Part 4410.4300, subparts 18, item A; and 29					15	0	
Part 4410.4300, subparts 8, items A & B; 10, items A to C; 16, items A & D; 17, items A to C & E to G; and 18, items B & C					35	0	
Part 4410.4300, subparts 4; 5 items A & B; 13; 15; 16, items B & C; and 17 item D					70	0	

NOTES:

Worksheet in Delta (DQ DQ#)