

STATE OF COLORADO

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
AIR POLLUTION CONTROL DIVISION
TELEPHONE: (303) 692-3150



CONSTRUCTION PERMIT

PERMIT NO: 04LO1295

INITIAL APPROVAL

Modification #3

DATE ISSUED: NOV 14 2011

ISSUED TO: Sterling Ethanol, L.L.C.

THE SOURCE TO WHICH THIS PERMIT APPLIES IS DESCRIBED AND LOCATED AS FOLLOWS:

Denatured ethanol manufacturing plant, located at 450 Angus Avenue, Sterling, Logan County Colorado.

THE SPECIFIC EQUIPMENT OR ACTIVITY SUBJECT TO THIS PERMIT INCLUDES THE FOLLOWING:

All equipment and activities are listed in Attachment A of this facility wide-permit.

THIS PERMIT IS GRANTED SUBJECT TO ALL RULES AND REGULATIONS OF THE COLORADO AIR QUALITY CONTROL COMMISSION AND THE COLORADO AIR POLLUTION PREVENTION AND CONTROL ACT C.R.S. (25-7-101 et seq), TO THOSE GENERAL TERMS AND CONDITIONS INCLUDED IN THIS DOCUMENT AND THE FOLLOWING SPECIFIC TERMS AND CONDITIONS:

PC.1. General Identifying Information

PC.1.1 The AIRs identification number shall be marked on the subject equipment for ease of identification. (Reference: Regulation No. 3, Part B, Section III.E.) (State only enforceable)

PC.1.2 The manufacturer, model number and serial number of the subject equipment shall be provided to the Division prior to Final Approval. (Reference: Regulation No. 3, Part B, Section III.E.)

PC.1.3 All previous versions of this permit are canceled upon issuance of this permit.

PC.2. Production and Emission Limitations

PC.2.1 This source shall be limited to a maximum raw material process rate or fuel use rate as listed below and all other activities, operational rates and numbers of equipment as stated in the application. Monthly records of the actual consumption rate shall be maintained by the applicant and made available to the Division for inspection upon request. (Reference: Regulation No. 3, Part B, Section II.A.4.) Compliance with the yearly emission limits shall be determined on a rolling twelve (12) month total. By the end of each month a new twelve month annual total is calculated based on the previous complete twelve months' data.

AIRS POINT ID: 075/0086/999

ver. 2/00

04LO1295-PERMIT-2011-11-14

- 2.1.1 Receiving of corn shall not exceed 672,000 tons per year. (AIRs Points 001)
- 2.1.2 Milling of corn shall not exceed 600,000 tons per year. (AIRs Point 001)
- 2.1.3 Consumption of natural gas in one (1) 159 MMBtu/hr, boiler shall not exceed 1392.8 MMScf per year. (AIRs Point 003)
- 2.1.4 Receiving of denaturant (gasoline) shall not exceed 3,000,000 gallons per year. (AIRS Point 002)

PC.2.2 This source shall be limited to a maximum production rate as listed below and all other activities, operational rates and numbers of equipment as stated in the application. Monthly records of the actual production rate shall be maintained by the applicant and made available to the Division for inspection upon request. Compliance with the annual limits shall be determined on a rolling (12) month total. By the end of each month a new twelve month total is calculated based on the previous twelve months' data (Reference: Regulation No. 3, Part B, Section II.A.4.)

- 2.2.1 Production of denatured ethanol shall not exceed 60,000,000 gallons per year. (AIRs Points 002, 004 and 009)
- 2.2.2 Production of Wet Distillers Grains and Solubles (WDGS) shall not exceed **510,000** tons (dry weight) per year (AIRS Point 010).

PC.2.3 Emissions of air pollutants from the emission sources described in Attachment A shall not exceed the following limitations (as calculated in the Division's preliminary analysis). Compliance with the annual limits shall be determined on a rolling (12) month total. By the end of each month a new twelve month total is calculated based on the previous twelve months' data. The permit holder shall calculate monthly emissions and keep a compliance record on site for Division review. (Reference: Regulation No. 3, Part B, Section II.A.4)

Particulate Matter:	24.7 tons per year.
PM10 (Particulate Matter<10 µm):	23.5 tons per year.
PM2.5 (Particulate Matter<2.5 µm):	23.5 tons per year.
Nitrogen Oxides:	72.7 tons per year.
Sulfur Dioxide:	0.7 tons per year.
Volatile Organic Compounds:	91.2 tons per year.
Carbon Monoxide:	71.4 tons per year.
Individual Hazardous Air Pollutant (HAP)*:	8.00 tons per year.
Acetaldehyde	9.98 tons per year
Total of all HAPs:	13.9 tons per year.

*Except Acetaldehyde

P.C.2.4.1 Emissions of Acetaldehyde from all insignificant activities shall not exceed 39 pounds per year.

The applicant shall track emissions from all insignificant activities on a yearly basis. This information shall be made available to the Division for inspection upon request. For the purposes of this condition, insignificant activities shall be defined as any activity or equipment which emits any amount but does not require an Air Pollutant Emission Notice (APEN). The applicant shall submit a list to the Division of all insignificant activities which emit Acetaldehyde prior to Final Approval. (PS memo 97-001)

P.C.2.4.2 Emissions of Volatile Organic Compounds (VOC) from all insignificant activities shall not exceed 8.79 tons per year. The applicant shall track emissions from all insignificant activities on a yearly basis. This information shall be made available to the Division for inspection upon request.

For the purposes of this condition, insignificant activities shall be defined as any activity or equipment which emits any amount but does not require an Air Pollutant Emission Notice (APEN). The applicant shall submit a list to the Division of all insignificant activities which emit volatile Organic Compounds prior to Final Approval. (PS memo 97-001)

P.C.2.5 Emissions of fugitive particulate matter (PM) and fugitive particulate matter of less than ten microns (PM_{10}) from paved haul roads shall not exceed the following limits. These emission limits are based on the production rates listed above. The Division assumes that these levels are being met if the control measures stated in the approved control plan are followed and the stated process rates are not exceeded.

	<u>tons per year</u>
Fugitive Particulate Matter	13.2
Fugitive Particulate Matter less than 10 microns (PM_{10})	2.6
Fugitive Particulate Matter less than 2.5 microns ($PM_{2.5}$)	0.3

P.C.2.6 The particulate emission control measures listed on the attached page (as approved by the Division) shall be applied to the particulate emission producing sources as required by Regulation No. 1, Section III.D.1.b.

P.C.2.7 The following conditions apply to: FACILITY BAGHOUSES (Reference: Regulation No. 3, Part B, Section II.A.4)

PC.2.7.1 PM , PM_{10} and $PM_{2.5}$ emissions from all grain handling and milling operations shall be captured and controlled by the grain receiving baghouse (AIRs point 001) and the hammermill baghouse (AIRs point 001).

PC.2.7.2 The operations of each baghouse shall be in accordance with the following requirements:

2.7.2.1 The baghouses shall be operated whenever the associated emission units are in operation.

2.7.2.2 The baghouses shall be properly installed, operated and maintained. The manufacturer's operation and maintenance manual, or its equivalent, detailing proper operation, inspection and maintenance of the dry dust collectors shall be kept on site and readily available to the Division upon request.

2.7.2.3 Each baghouse shall be equipped with an operational pressure differential indicator. The pressure differential indicator readings shall be recorded at least once each day that the associated baghouse is operating. The pressure

indicator shall be properly installed, operated, calibrated, and maintained. The manufacturer's operation and maintenance manual, or its equivalent, detailing proper operation, inspection and maintenance of the pressure differential indicator shall be kept on site and readily available to the Division upon request.

- 2.7.2.4 Baghouse filter bags/cartridges are to be inspected and/or replaced according to the manufacturer's documentation or more frequently as indicated by pressure differential indicator readings or other indication of bag failure.
- 2.7.2.5 Routine observations (at least once each day during daylight hours of baghouse operation) shall be conducted to determine whether there are visible emissions from the stack, leaks, noise, atypical pressure differential readings, or other indications, which may necessitate corrective action. Corrective action shall be taken immediately if necessary. These daily observations and corrective actions (if required) shall be recorded in a log and made available to the Division for inspection.
- 2.7.2.6 Collected waste material from the baghouses shall be handled, transported, and stored properly.
- 2.7.2.7 The source shall maintain on-site an inventory of spare bags/cartridges of each type used facility-wide to ensure rapid replacement in the event of bag/cartridge failure.
- 2.7.2.8 The emissions from the grain receiving baghouse (AIRs 001) shall not exceed the following emission limits (3-hour or EPA testing method average).
 - 2.7.2.8.1 1.67 pounds per hour PM/PM-10.
- 2.7.2.9 The emissions from the milling baghouse (AIRs 001) shall not exceed the following emission limits (3-hour or EPA testing method 5D average).
 - 2.7.2.9.1 0.75 pounds per hour PM/PM-10.

PC.3. Specific State or Federal Standards

- PC.3.1 Visible emissions shall not exceed twenty percent (20%) opacity during normal operation of the source. During periods of startup, process modification, or adjustment of control equipment visible emissions shall not exceed 30% opacity for more than six minutes in any sixty consecutive minutes. Opacity shall be measured by EPA Method 9. (Reference: Regulation No. 1, Section II.A.1. & 4.)
- PC.3.2 This source is subject to the odor requirements of Regulation No. 2. (State only enforceable)
- PC.3.3 The 159 MMBTU Boiler (AIRs Point 003) is subject to the New Source Performance Standards requirements of Regulation No. 6, Part A, Subpart Db (Federal NSPS 40 CFR Part 60, Subpart Db), Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, including but not limited to the following:
 - a. § 60.44b.(a) – Standard for Nitrogen Oxides.

- i. No owner or operator of an affected facility shall cause to be discharged into the atmosphere any gases that contain nitrogen oxides (expressed as NO₂) in excess of 0.20 pounds per million Btu heat input.
 - ii. This standard applies at all times including periods of startup, shutdown, or malfunction.
 - iii. Compliance with the standard shall be determined on a 30-day rolling average basis.
- b. § 60.46b.(e) – To determine compliance with the emission limits for nitrogen oxides required under §60.44b, the owner or operator of an affected facility shall conduct the initial performance test as required under §60.8 using the continuous system for monitoring nitrogen oxides under §60.48b.
- c. § 60.49b (40 CFR 60.48b(g)(2)) – The facility will continue to operate a Continuous Emission Monitoring System (CEMS) or develop an "Operation Monitoring Plan" for approval within 360 days of startup of operations to produce more than 50,000,000 gallons of ethanol per year, that:
- (1) Continually monitors operating conditions, e.g., boiler temperature, boiler gas valve % open settings, air/fuel ratio, and boiler fuel gas flowrate (§ 60.49b(c)(1)).
 - (2) Includes data used to identify the relationship between the operating conditions and NO_x formation, i.e., higher temperatures, relationship to CO and valve settings that may create more NO_x. The plan must discuss the NO_x/CO correlation (§ 60.49b(c)(2)).
 - (3) Identifies how the proposed and approved operating conditions will be monitored, i.e., operators continually monitor temperature and valve setting (§ 60.49b(c)(3)).
- d. § 60.49b. - Reporting and Recordkeeping Requirements.
- (i) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day. §60.49b.(d).

In addition, the following requirements of Regulation No. 6, Part A, Subpart A, General Provisions, apply.

- a. At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. (Reference: Regulation 6, Part A. General Provisions from 40CFR60.11
- b. No article, machine, equipment or process shall be used to conceal an emission, which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with opacity standard or with a standard, which is based on the concentration of a pollutant in the gases discharged to the atmosphere. (§ 60.12)
- c. Written notification of construction and initial startup dates shall be submitted to the Division as required under § 60.7.

- d. Records of startups, shutdowns, and malfunctions shall be maintained, as required under § 60.7.

A copy of the complete applicable subpart is attached to this permit and may be found at:
<http://www.gpoaccess.gov/cfr/retrieve.html>

PC.3.4 The storage tanks identified as T61, T62, T63, T64 and T65, listed under AIRs Point 002, are subject to the New Source Performance Standards requirements of Regulation No. 6, Part A, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, including, but not limited to, the following:

- a. Standards §60.112b.
 - i. Each vessel shall be equipped with a fixed roof in combination with an internal floating roof meeting the requirements of §60.112b.(a).(1)
- b. Testing and procedures §60.113b
 - i. Visual inspections as specified in §60.113b.(a).(1) through (5) as applicable
- c. Reporting and Recordkeeping requirements per §60.115b
- d. Monitoring of Operations §60.116b
 - i. Maintain records of the Volatile Organic Liquid (VOL) stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

A copy of the complete applicable subpart is attached to this permit and may be found at:
<http://www.gpoaccess.gov/cfr/retrieve.html>

PC.3.5 This source is subject to the New Source Performance Standards requirements of Regulation No. 6, Part A, Subpart V Va, "Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006", including, but not limited to, the following:

3.5.1 Equipment monitoring

- 1) §60.482-2a(a)(1) – Each pump in light liquid service shall be monitored monthly to detect leaks
- 2) §60.482-2a(a)(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) §60.482-7a(a)(1)- Each valve in gas/vapor or light liquid service shall be monitored monthly to detect leaks. (Monthly monitoring will continue to be required in order to apply control efficiencies as listed in the Leak Detection and Repair (LDAR) program).
- 4) §60.482-11a(a)(1) – The owner or operator shall initially monitor all connectors (flanges) in

the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup. (This requirement shall become effective after EPA approval of the connector monitoring requirements as contained in VVa)

5) A connector (flange) monitoring program shall be established to meet the monitoring requirements as listed in §60.482-11a (3). (This requirement shall become effective after EPA approval of the connector monitoring requirements as contained in VVa)

6) USEPA Method 21 shall be used to determine the presence of leaking sources §60.485a(g)(1).

3.5.2 Recordkeeping requirements. §60.486a

3.5.3 Reporting requirements. §60.487a

A copy of the complete applicable subpart is attached to this permit and may be found at:
<http://www.gpoaccess.gov/cfr/retrieve.html>

PC.3.6 To demonstrate compliance with the VOC emission control reductions using Leak Detection and Repair (LDAR) for AIRs Point 007, the applicant shall perform monthly monitoring for equipment leaks on the following equipment: 1) pumps in light liquid service; 2) valves in gas/vapor service and 3) valves in light liquid service. USEPA method 21 as described in §60.485a(b) shall be used to monitor the equipment. The applicant may not use any monitoring schedule less frequent than monthly and continue to apply the control efficiencies as listed in the Leak Detection and Repair (LDAR) program.

PC.3.7 Regulation No. 6, Part B, Section III, Standards of Performance for New Manufacturing Processes applies to AIRs Point 001.

PC.3.8 Regulation No. 6, Part B, Section II, Standards of Performance for New Fuel Burning Equipment applies to AIRs Points 003, 008 and 009.

PC.3.9 Regulation No. 6, Part B, Section VII, Standards of Performance for Incinerators, applies to flares under AIRs Points 008 and 009. Note: only the opacity standard applies per PS Memo 99-02.

PC.3.10 The provisions of Regulation No. 7, Section VI.B.2 apply to the storage tanks (T61, T62, T63, T64, and T65; AIRs Point 002) including, but not limited to, the following:

- a. The tank is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials; and
- b. All openings, except stub drains, are equipped with covers, lids, or seals such that:
 - i. The cover, lid, or seal is in the closed position at all times except when in actual use;
 - ii. Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;
 - iii. and Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.
- c. Perform a routine inspection through the tank roof hatches at least once every six months;

- i. During the routine inspection, the operator shall measure for detectable vapor loss inside the hatch. Detectable vapor loss means a VOC concentration exceeding 10,000 ppm, using a portable hydrocarbon analyzer.
- d. Perform a complete inspection of the cover and seal whenever the tank is out of service, whenever the routine inspection required in Condition No. 0.c above reveals detectable vapor loss, and at least once every ten years, and shall notify the Division in writing before such an inspection.
- e. Ensure during inspections that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials; that the cover is floating uniformly on or above the liquid surface; that there are no visible defects in the surface of the cover or liquid accumulated on the cover; and that the seal is uniformly in place around the circumference of the cover between the cover and the tank wall. If these items are not met, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Division in writing. Such a request must document that alternative storage capacity is unavailable and specify a schedule of actions the owner or operator will take that will assure that the items will be repaired or the vessel will be emptied as soon as possible;
- f. Maintain records for at least two years of the results of all inspections.
- g. Above ground storage tanks used for the storage of petroleum liquid shall have all external surfaces coated with a material which has a reflectivity for solar radiation of 0.7 or more. Methods A or B of ASTM E424 shall be used to determine reflectivity. Alternatively, any untinted white paint may be used which is specified by the manufacturer for such use.

This provision shall not apply to written symbols or logograms applied to the external surface of the container for purposes of identification provided such symbols do not cover more than 20% of the exposed top and side surface area of the container or more than 18.6 square meters (200 square feet), whichever is less.

PC.3.11 The owner or operator shall design, construct, operate and maintain the flare (AIRs Points 008 and 009) according to the requirements set out in 40 CFR §60.18, which include, but are not limited to:

- PC.3.11.1 The flare shall be designed for and operated with no visible emissions as determined by the methods specified in 40 CFR §60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
- PC.3.11.2 An owner/operator has the choice of adhering to either the heat content specifications in §60.18 C (3)(ii) and the maximum tip velocity specifications in 60.18 C(4), or adhering to the requirements in §60.18 c(3)(i).
- PC.3.11.3 The flare used for the truck loadout shall be steam-assisted, air-assisted or non-assisted, as specified in 60.18 C(6).
- PC.3.11.4 This flare shall be monitored to ensure it is operated and maintain in conformance with the design, as specified in 60.18(d).
- PC3.11.5 Each flare shall be operated at all times when emissions are vented to the flare.

PC.4. *Operating & Maintenance Plan*

- PC4.1 Emissions from the truck and rail grain unloading process shall be vented to a baghouse (AIRs Point 001). Operating parameters of this control device shall be identified prior to final approval of this permit (Reference: Regulation No. 3, Part B, Section III.G.7).
- PC.4.2 Emissions from grain scalping, milling storage, and the grain hammermill processes shall be vented to a baghouse (AIRs Point 001). Operating parameters of these control devices shall be identified prior to final approval of this permit and shall include the provisions of PC.2.8. (Reference: Regulation No. 3, Part B, Section III.G.7).
- PC.4.3 Volatile organic compound emissions from the truck loading shall be vented to a flare (AIRs Point 009). Operating parameters of this control device shall be identified prior to final approval of this permit (Reference: Regulation No. 3, Part B section III.G.7)
- PC.4.4. Emissions from the fermentation process (AIRs Point 004) shall be vented to a packed-bed, CO₂ scrubber. Operating parameters of this control device shall be identified prior to final approval of this permit. (Reference: Regulation No. 3, Part B, Section III.G.7)
- PC.4.5 Emissions from the Process Vent Header System (including mash preparation, cooking and conversion, distillation, dehydration and evaporation and stillage separation) shall be vented to the process scrubber (AIRs POINT 005). Operating parameters of this control device shall be identified prior to final approval of this permit (Reference: Regulation No.3, Part B, Section III.G.7)
- PC.4.6 The circulating water in the cooling tower cells (AIRs Point 010) shall be sampled quarterly to determine the total dissolved solids (TDS) concentration (Reference: Reg. No. 3, Part B, III. E). The volume of water circulated shall also be recorded on an annual basis. The total solids concentration shall be used to calculate emissions.
- PC.4.7 Prior to final approval being issued, the applicant shall submit to the Division for approval, a revised operating and maintenance plan for all control equipment and control practices, and a proposed record keeping format that will outline how the applicant will maintain compliance on an ongoing basis with the requirements of this permit. The operating and maintenance plan shall commence at startup. (Reference: Regulation No. 3, Part B, Section III.G.7.)
- PC.4.8 Methane generated from the biomethanator shall be combusted in the biomethanator flare (AIRS Point 008) or the boiler (AIRS Point 004). (Reference: Reg. No. 3, Part B, III. E)

PC.5. *Other Specific Conditions*

- PC.5.1 A Revised Air Pollutant Emission Notice (APEN) shall be filed: (Reference: Regulation No. 3, Part A, Section II.C.)

- a. Annually whenever a significant increase in emissions occurs as follows:

For any criteria pollutant:

For sources emitting **less than 100 tons per year**, a change in actual emissions of five tons per year or more, above the level reported on the last APEN submitted; or

For any non-criteria reportable pollutant:

If the emissions increase by 50% or five (5) tons per year, whichever is less, above the level reported on the last APEN submitted to the Division.

- b. Whenever there is a change in the owner or operator of any facility, process, or activity; or
- c. Whenever new control equipment is installed, or whenever a different type of control equipment replaces an existing type of control equipment; or
- d. Whenever a permit limitation must be modified; or
- e. No later than 30 days before the existing APEN expires.

PC.5.2 Within ninety (90) days after the issuance of this permit compliance with the following conditions shall be demonstrated to the Division, 1) condition 2.1.1 (increase in corn receiving limit, AIRS point 001, 2) condition 2.2.2 (increase in WDGS production limit, AIRS point 010), 3) condition 5.4 (addition of a fourth cell to the cooling tower, AIRS point 011 and 4) condition 5.4 (flare heights AIRS points 008 and 009). It is the permittee's responsibility to self certify compliance with the conditions. Failure to demonstrate compliance within 90 days may result in revocation of those portions of the permit pertaining to emissions points 001, 008, 009 and 010.

PC.5.3 The receptor exclusion zone, as described in the PM₁₀ impact modeling analysis as submitted with the initial application for this permit, shall be completely enclosed by a fence line and posted with no trespassing signs that preclude public access to this site. This requirement is imposed as a result of the modeled ambient air PM₁₀ impacts that result from the facility operations. (Reference: Regulation No. 3, Part B, Section III.B.5)

PC.5.4 Stack heights shall not be less than the following heights above ground level:

Emission Point	Minimum Stack Height (ft)
AIRs Point 001, Unloading Baghouse	40
Milling Baghouse	40
AIRs Point 003, Boiler	45
AIRs Point 004, Fermentation Scrubber	45
AIRs Point 005, Process Scrubber	45
Airs Point, 008, Biomethanator flare	21
AIRs Point 009, Load out Flare	31
AIRs Point 011, Cooling tower (4 cells)	28



Michael J. Harris, P.E.
Permit Engineer



R K Hancock III, P.E.
Construction Permits Unit Supervisor

Sterling Ethanol, L.L.C.

Permit No. 04LO1295

Initial Approval – modification #3

Page 11 of 24

Colorado Department of Public Health and Environment

Air Pollution Control Division

Permit History

Initial Approval issued on March 23, 2005 – initial production 45 million gallons per year

Initial approval mod 1 – issued on August 16, 2006 increased production from 45 to 50 million gallons year

Initial approval mod 2 – June 3, 2008, increased production from 50 to 60 million gallons per year

Initial approval mod 3 – this issuance, increased grain receiving limit from 600,000 tpy and wdgs production limit from 505,500 tpy, added fourth cell to cooling tower, added PM2.5 factors and limits, modified emission limits, corrected emission factors, and corrected flare heights

Notes to Permit Holder:

- 1) The production or raw material processing limits and emission limits contained in this permit are based on the production/processing rates requested in the permit application. These limits may be revised upon request of the permittee providing there is no exceedence of any specific emission control regulation or any ambient air quality standard. A revised air pollution emission notice (APEN) and application form must be submitted with a request for a permit revision.
- 2) This source is subject to the Common Provisions Regulation Part II, Subpart E, Affirmative Defense Provision for Excess Emissions During Malfunctions. The permittee shall notify the Division of any malfunction condition which causes a violation of any emission limit or limits stated in this permit as soon as possible, but no later than noon of the next working day, followed by written notice to the Division addressing all of the criteria set forth in Part II.E.1. of the Common Provisions Regulation. See:
<http://www.cdphe.state.co.us/regulations/airregs/5CCR1001-2.pdf>.
- 3) This source is classified as a:
Synthetic minor source for Prevention of Significant Deterioration (PSD) applicability
Synthetic minor source for Operating permit applicability
Synthetic minor source for Maximum Achievable Control Technology (MACT) standard applicability

At a: Synthetic Minor Facility
- 4) In accordance with C.R.S. 25-7-114.1, the Air Pollutant Emission Notices (APENs) associated with this permit are valid for a term of five years. Revised APENs shall be submitted no later than 30 days before the five year term expires.

AIRS Point ID	Date received	Expiration date	Renewal date
001	6.29.07	6.29.12	5.29.12
002	6.29.07	6.29.12	5.29.12
003	6.29.07	6.29.12	5.29.12
004	6.29.07	6.29.12	5.29.12
005	6.29.07	6.29.12	5.29.12
006	7.30.07	7.30.12	6.30.12
007	6.29.07	6.29.12	5.29.12
008	12.27.10	12.27.15	11.27.15
009	12.27.10	12.27.15	11.27.15
010	9.20.10	9.20.15	8.20.15
011	6.29.07	6.29.12	5.29.12

- 5) The following emissions of non-criteria reportable air pollutants are established based upon the material consumptions as indicated in Condition Number 2. This information is listed to inform the operator of the Division's analysis of the specific compounds. This information is listed on the Division's emission inventory system.

SUBSTANCE	BIN	C.A.S.#	EMISSIONS [LB/YR]
Acetaldehyde	A	75-07-0	19,960
Acrolein	A	107-02-8	615
Methanol	C	67-56-1	3,051
Formaldehyde	A	50-00-0	650
Ammonia	C	7664-41-7	2,400

GENERAL TERMS AND CONDITIONS: (IMPORTANT! READ ITEMS 5,6,7 AND 8)

1. This permit is issued in reliance upon the accuracy and completeness of information supplied by the applicant and is conditioned upon conduct of the activity, or construction, installation and operation of the source, in accordance with this information and with representations made by the applicant or applicant's agents. It is valid only for the equipment and operations or activity specifically identified on the permit.
2. Unless specifically stated otherwise, the general and specific conditions contained in this permit have been determined by the APCD to be necessary to assure compliance with the provisions of Section 25-7-114.5(7)(a), C.R.S.
3. Each and every condition of this permit is a material part hereof and is not severable. Any challenge to or appeal of, a condition hereof shall constitute a rejection of the entire permit and upon such occurrence, this permit shall be deemed denied *ab initio*. This permit may be revoked at any time prior to final approval by the Air Pollution Control Division (APCD) on grounds set forth in the Colorado Air Quality Control Act and regulations of the Air Quality Control Commission (AQCC), including failure to meet any express term or condition of the permit. If the Division denies a permit, conditions imposed upon a permit are contested by the applicant, or the Division revokes a permit, the applicant or owner or operator of a source may request a hearing before the AQCC for review of the Division's action.
4. This permit and any required attachments must be retained and made available for inspection upon request at the location set forth herein. With respect to a portable source that is moved to a new location, a copy of the Relocation Notice (required by law to be submitted to the APCD whenever a portable source is relocated) should be attached to this permit. The permit may be reissued to a new owner by the APCD as provided in AQCC Regulation No. 3, Part B, Section II.B. upon a request for transfer of ownership and the submittal of a revised APEN and the required fee.
5. Issuance (initial approval) of an emission permit does not provide "final" authority for this activity or operation of this source. Final approval of the permit must be secured from the APCD in writing in accordance with the provisions of 25-7-114.5(12)(a) C.R.S. and AQCC Regulation No. 3, Part B, Section III.G. Final approval cannot be granted until the operation or activity commences and has been verified by the APCD as conforming in all respects with the conditions of the permit. If the APCD so determines, it will provide written documentation of such final approval, which does constitute "final" authority to operate. ***Compliance with the permit conditions must be demonstrated within 180 days after commencement of operation.***
6. **THIS PERMIT AUTOMATICALLY EXPIRES IF** you (1) do not commence construction or operation within 18 months after either the date of issuance of this permit or the date on which such construction or activity was scheduled to commence as set forth in the permit, whichever is later; (2) discontinue construction for a period of 18 months or more; or (3) do not complete construction within a reasonable time of the estimated completion date. Extensions of the expiration date may be granted by the APCD upon a showing of good cause by the permittee prior to the expiration date.
7. **YOU MUST** notify the APCD no later than fifteen days after commencement of the permitted operation or activity by submitting a Notice of Startup (NOS) form to the APCD. The Notice of Startup (NOS) form may be downloaded online at www.cdphe.state.co.us/ap/downloadforms.html. Failure to do so is a violation of AQCC Regulation No. 3, Part B, Section III.G.1., and can result in the revocation of the permit. ***You must demonstrate compliance with the permit conditions within 180 days after commencement of operation as stated in condition 5.***
8. Section 25-7-114.7(2)(a), C.R.S. requires that all sources required to file an Air Pollution Emission Notice (APEN) must pay an annual fee to cover the costs of inspections and administration. If a source or activity is to be discontinued, the owner must notify the Division in writing requesting a cancellation of the permit. Upon notification, annual fee billing will terminate.
9. Violation of the terms of a permit or of the provisions of the Colorado Air Pollution Prevention and control Act or the regulations of the AQCC may result in administrative, civil or criminal enforcement actions under Sections 25-7-115 (enforcement), -121 (injunctions), -122 (civil penalties), -122.1 (criminal penalties), C.R.S.

PARTICULATE EMISSIONS CONTROL PLAN

THE FOLLOWING PARTICULATE EMISSIONS CONTROL MEASURES SHALL BE USED FOR COMPLIANCE PURPOSES ON THE ACTIVITIES COVERED BY THIS PERMIT, AS REQUIRED BY THE AIR QUALITY CONTROL COMMISSION REGULATION NO.1, SECTION III.D.1.b. THIS SOURCE IS SUBJECT TO THE FOLLOWING EMISSION GUIDELINES:

- a. **Haul Roads** - No off-property transport of visible emissions shall apply to on-site haul roads, the nuisance guidelines shall apply to off-site haul roads.
- b. **Haul Trucks** - There shall be no transport of visible emissions from haul trucks when operating on the property of the owner or operator. There shall be no off-vehicle transport of visible emissions from the material in the haul trucks when operating on the property of the owner or operator.

Control Measures

- 1. Vehicle haul roads shall be paved and swept weekly to remove any accumulated dirt or mud from the roadway.

ATTACHMENT A:
DETAILS OF EQUIPMENT / ACTIVITIES COVERED UNDER THIS FACILITY-WIDE PERMIT

AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls
001	<p>Emission Point Description: Corn receiving, scalping, storage, handling, and milling; and trash corn loadout. Equipment includes three (3) Roscamp Champion hammermills, model 40X38, serial numbers 439061, 439060 and 439979.</p> <p>Controlled Emission Factor Summary:</p> <p>Particulate emissions from receiving baghouse: (based on receiving 672,000 tpy)</p> <p>Particulate Matter: 0.0218 lbs/ton of corn received Particulate Matter < 10 µm: 0.0218 lbs/ton of corn received Particulate Matter < 2.5 µm: 0.0218 lbs/ton of corn received</p> <p>Particulate emissions from hammermill baghouse: (based on milling 600,000 tpy)</p> <p>Particulate Matter: 0.0110 lbs/ton of corn received Particulate Matter < 10 µm: 0.0110 lbs/ton of corn received Particulate Matter < 2.5 µm: 0.0110 lbs/ton of corn received</p> <p>Fugitive emissions from grain handling:</p> <p>Particulate Matter: 0.0054 lbs/ton of corn received (1.81 tons per year) Particulate Matter < 10 µm: 0.0024 lbs/ton of corn received (0.81 tons per year) Particulate Matter < 2.5 µm: 0.0024 lbs/ton of corn received (0.81 tons per year)</p> <p>Controls:</p> <p>Unloading Baghouse - One (1) baghouse (Airlanco, model 236/198RSLP, serial number W/HI-EN8 3001400-0001) for control of pit operations (corn receiving).</p> <p>Milling Baghouse - One (1) baghouse (Airlanco, model 144AST10-11, serial number 80401173-0001) for control of process operations (internal handling, storage, scalping, and dry milling of the corn).</p> <p>Specific Requirements/Regulations: Regulation No. 6, Part B, Section III, Standards of Performance for New Manufacturing Processes</p>

ATTACHMENT A:
DETAILS OF EQUIPMENT / ACTIVITIES COVERED UNDER THIS FACILITY-WIDE PERMIT

AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls
002	<p>Emission Point Description: Six (6) Volatile Organic Liquid (VOL) storage tanks:</p> <p>One (1) 100,000 gallon capacity internal floating roof tank identified as the 190 Proof Tank. This tank provides storage of off-specification ethanol. VOC emissions are vented to the atmosphere. This tank shall either be equipped with a continuous seal as required in 40 C.F.R. Part 60.112b.(a).(1).(ii).</p> <p>One (1) 100,000 gallon capacity internal floating roof tank identified as the 200 Proof Tank. This tank provides temporary storage of the daily production of ethanol. VOC emissions are vented to the atmosphere. This tank shall either be equipped with a continuous seal as required in 40 C.F.R. Part 60.112b.(a).(1).(ii).</p> <p>Two (2) 500,000 gallon capacity internal floating roof tank identified as the Denatured Ethanol #1 & #2 Tanks. This tanks provides storage of a 95% ethanol / 5% gasoline mixture (denatured ethanol). VOC emissions are vented to the atmosphere. These tanks shall either be equipped with a continuous seal as required in 40 C.F.R. Part 60.112b.(a).(1).(ii).</p> <p>One (1) 100,000 gallon capacity internal floating roof tank identified as the Denaturant Tank. This tanks provides storage of gasoline (RVP 10). VOC emissions are vented to the atmosphere. This tank shall either be equipped with a continuous seal as required in 40 C.F.R. Part 60.112b.(a).(1).(ii).</p> <p>One (1) 2,300 gallon capacity vertical fixed roof tank identified as the Corrosion Inhibitor Tank. This tanks provides storage of Xylene(-m). VOC emissions are vented to the atmosphere.</p> <p>Controlled Emission Factor Summary:</p> <p>VOC: 0.0244 lbs/ton (0.0803 lb/1000 gallons) of denatured ethanol produced (one ton of ethanol = 304 gallons)</p> <p>(based on emissions of 2.41 tons of VOC/year as determined by Tanks 4.02 simulation) Denatured ethanol throughput = 60,000,000 gallons/year = 1,97,368.4 tons/year (304 gallons = 1 ton)</p> <p>Specific Requirements/Regulations: All tanks listed above, except the Corrosion Inhibitor Tank, are subject to Regulation No. 6, Part A, Subpart Kb The Denaturant Tank and Denatured Ethanol #1 & #2 Tanks are subject to the provisions of Regulation No. 7, Section VI.B.2.</p>

ATTACHMENT A:
DETAILS OF EQUIPMENT / ACTIVITIES COVERED UNDER THIS FACILITY-WIDE PERMIT

AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls																		
003	<p>Emission Point Description: One (1) firetube boiler, (Make, Model No. and, Serial No. shall be submitted to the Division prior to Final Approval), rated at 159.0 MMBtu/hr fired only on natural gas.</p> <p>Emission Factor Summary: <i>Natural Gas Combustion:</i></p> <table> <tr> <td>Particulate Matter:</td><td>7.6 pounds per MMScf</td></tr> <tr> <td>Particulate Matter < 10 µm (PM₁₀):</td><td>7.6 pounds per MMScf</td></tr> <tr> <td>Particulate Matter < 2.5 µm (PM_{2.5}):</td><td>7.6 pounds per MMScf</td></tr> <tr> <td>Sulfur Dioxide:</td><td>0.6 pounds per MMScf</td></tr> <tr> <td>Nitrogen Oxides:</td><td>100.0 pounds per MMScf</td></tr> <tr> <td>Volatile Organic Compounds:</td><td>5.5 pounds per MMScf</td></tr> <tr> <td>Carbon Monoxide:</td><td>84.0 pounds per MMScf</td></tr> <tr> <td>Hexane</td><td>1.800 pounds per MMScf</td></tr> <tr> <td>Formaldehyde</td><td>0.075 pounds per MMScf</td></tr> </table> <p>Specific Requirements/Regulations: Standard for Particulate Matter of Regulation No. 6, Part B, II.C., Standards of Performance for New Fuel-Burning Equipment. 40 C.F.R. Part 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.</p>	Particulate Matter:	7.6 pounds per MMScf	Particulate Matter < 10 µm (PM ₁₀):	7.6 pounds per MMScf	Particulate Matter < 2.5 µm (PM _{2.5}):	7.6 pounds per MMScf	Sulfur Dioxide:	0.6 pounds per MMScf	Nitrogen Oxides:	100.0 pounds per MMScf	Volatile Organic Compounds:	5.5 pounds per MMScf	Carbon Monoxide:	84.0 pounds per MMScf	Hexane	1.800 pounds per MMScf	Formaldehyde	0.075 pounds per MMScf
Particulate Matter:	7.6 pounds per MMScf																		
Particulate Matter < 10 µm (PM ₁₀):	7.6 pounds per MMScf																		
Particulate Matter < 2.5 µm (PM _{2.5}):	7.6 pounds per MMScf																		
Sulfur Dioxide:	0.6 pounds per MMScf																		
Nitrogen Oxides:	100.0 pounds per MMScf																		
Volatile Organic Compounds:	5.5 pounds per MMScf																		
Carbon Monoxide:	84.0 pounds per MMScf																		
Hexane	1.800 pounds per MMScf																		
Formaldehyde	0.075 pounds per MMScf																		

ATTACHMENT A:
DETAILS OF EQUIPMENT / ACTIVITIES COVERED UNDER THIS FACILITY-WIDE PERMIT

AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls																				
004	<p>Emission Point Description: <i>Ethanol production:</i> Fermentation process consisting of six (6) fermentation and one (1) yeast preparation tanks.</p> <p>Controlled Emission Factor Summary:</p> <table> <tr> <td>Particulate Matter:</td><td>0.0032 lbs/ton (0.0105 lbs/1000 gallons) of ethanol produced</td></tr> <tr> <td>PM₁₀:</td><td>0.0017 lbs/ton (0.0057 lbs/1000 gallons) of ethanol produced</td></tr> <tr> <td>PM_{2.5}:</td><td>0.0017 lbs/ton (0.0057 lbs/1000 gallons) of ethanol produced</td></tr> <tr> <td>Volatile Organic Compounds:</td><td>0.3177 lbs/ton (1.0450 lbs/1000 gallons) of ethanol produced</td></tr> <tr> <td>Acetaldehyde:</td><td>0.0730 lbs/ton (0.2401 lbs/1000 gallons) of ethanol produced</td></tr> </table> <p>Annual Emissions</p> <table> <tr> <td>Particulate Matter:</td><td>0.32 ton /year</td></tr> <tr> <td>PM₁₀:</td><td>0.17 ton / year</td></tr> <tr> <td>PM_{2.5}:</td><td>0.17 ton / year</td></tr> <tr> <td>Volatile Organic Compounds:</td><td>31.35 ton /year</td></tr> <tr> <td>Acetaldehyde:</td><td>7.20 ton / year</td></tr> </table> <p>Controls: One (1) single pass, packed-bed ICM scrubber known as the CO₂ Scrubber (manufactured by Apache Stainless – custom made). This unit controls VOC emissions produced from the fermentation process.</p> <p>Specific Requirements/Regulations: Regulation No. 6, Part B, Section III, Standards of Performance for New Manufacturing Processes.</p>	Particulate Matter:	0.0032 lbs/ton (0.0105 lbs/1000 gallons) of ethanol produced	PM ₁₀ :	0.0017 lbs/ton (0.0057 lbs/1000 gallons) of ethanol produced	PM _{2.5} :	0.0017 lbs/ton (0.0057 lbs/1000 gallons) of ethanol produced	Volatile Organic Compounds:	0.3177 lbs/ton (1.0450 lbs/1000 gallons) of ethanol produced	Acetaldehyde:	0.0730 lbs/ton (0.2401 lbs/1000 gallons) of ethanol produced	Particulate Matter:	0.32 ton /year	PM ₁₀ :	0.17 ton / year	PM _{2.5} :	0.17 ton / year	Volatile Organic Compounds:	31.35 ton /year	Acetaldehyde:	7.20 ton / year
Particulate Matter:	0.0032 lbs/ton (0.0105 lbs/1000 gallons) of ethanol produced																				
PM ₁₀ :	0.0017 lbs/ton (0.0057 lbs/1000 gallons) of ethanol produced																				
PM _{2.5} :	0.0017 lbs/ton (0.0057 lbs/1000 gallons) of ethanol produced																				
Volatile Organic Compounds:	0.3177 lbs/ton (1.0450 lbs/1000 gallons) of ethanol produced																				
Acetaldehyde:	0.0730 lbs/ton (0.2401 lbs/1000 gallons) of ethanol produced																				
Particulate Matter:	0.32 ton /year																				
PM ₁₀ :	0.17 ton / year																				
PM _{2.5} :	0.17 ton / year																				
Volatile Organic Compounds:	31.35 ton /year																				
Acetaldehyde:	7.20 ton / year																				

ATTACHMENT A:
DETAILS OF EQUIPMENT / ACTIVITIES COVERED UNDER THIS FACILITY-WIDE PERMIT

AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls																				
005	<p>Emission Point Description: Process vent header system: process vents associated with mash preparation, cooking and conversion, distillation, dehydration and evaporation, and stillage separation.</p> <p>Controlled Emission Factor Summary:</p> <table border="0"> <tr> <td>Particulate Matter:</td><td>0.0004 lbs/ton (0.0013 lbs/1000 gallons) of ethanol produced</td></tr> <tr> <td>PM₁₀:</td><td>0.0004 lbs/ton (0.0013 lbs/1000 gallons) of ethanol produced</td></tr> <tr> <td>PM_{2.5}:</td><td>0.0004 lbs/ton (0.0013 lbs/1000 gallons) of ethanol produced</td></tr> <tr> <td>Volatile Organic Compounds:</td><td>0.2128 lbs/ton (0.7000 lbs/1000 gallons) of ethanol produced</td></tr> <tr> <td>Acetaldehyde:</td><td>0.0137 lbs/ton (0.0451 lbs/1000 gallons) of ethanol produced</td></tr> </table> <p>Annual Emissions</p> <table border="0"> <tr> <td>Particulate Matter:</td><td>0.04 tons</td></tr> <tr> <td>PM₁₀:</td><td>0.04 tons</td></tr> <tr> <td>PM_{2.5}:</td><td>0.04 tons</td></tr> <tr> <td>Volatile Organic Compounds:</td><td>21.0 tons</td></tr> <tr> <td>Acetaldehyde:</td><td>1.35 tons</td></tr> </table> <p>Controls: One (1) single pass, packed-bed ICM scrubber known as the Process Scrubber (manufactured by Apache Stainless – custom made). This unit controls VOC emissions from the process vent header system.</p> <p>Specific Requirements/Regulations: Regulation No. 6, Part B, Section III, Standards of Performance for New Manufacturing Processes.</p>	Particulate Matter:	0.0004 lbs/ton (0.0013 lbs/1000 gallons) of ethanol produced	PM ₁₀ :	0.0004 lbs/ton (0.0013 lbs/1000 gallons) of ethanol produced	PM _{2.5} :	0.0004 lbs/ton (0.0013 lbs/1000 gallons) of ethanol produced	Volatile Organic Compounds:	0.2128 lbs/ton (0.7000 lbs/1000 gallons) of ethanol produced	Acetaldehyde:	0.0137 lbs/ton (0.0451 lbs/1000 gallons) of ethanol produced	Particulate Matter:	0.04 tons	PM ₁₀ :	0.04 tons	PM _{2.5} :	0.04 tons	Volatile Organic Compounds:	21.0 tons	Acetaldehyde:	1.35 tons
Particulate Matter:	0.0004 lbs/ton (0.0013 lbs/1000 gallons) of ethanol produced																				
PM ₁₀ :	0.0004 lbs/ton (0.0013 lbs/1000 gallons) of ethanol produced																				
PM _{2.5} :	0.0004 lbs/ton (0.0013 lbs/1000 gallons) of ethanol produced																				
Volatile Organic Compounds:	0.2128 lbs/ton (0.7000 lbs/1000 gallons) of ethanol produced																				
Acetaldehyde:	0.0137 lbs/ton (0.0451 lbs/1000 gallons) of ethanol produced																				
Particulate Matter:	0.04 tons																				
PM ₁₀ :	0.04 tons																				
PM _{2.5} :	0.04 tons																				
Volatile Organic Compounds:	21.0 tons																				
Acetaldehyde:	1.35 tons																				
006	<p>Emission Point Description: In plant paved roads</p> <p>Controlled Emission Factor Summary:</p> <table border="0"> <tr> <td>Fugitive PM:</td><td>0.1334 lb/ton (0.4387 lb per 1000 gal) of ethanol produced</td></tr> <tr> <td>Fugitive PM₁₀:</td><td>0.0260 lb/ton (0.0856 lb per 1000 gal) of ethanol produced</td></tr> <tr> <td>Fugitive PM_{2.5}:</td><td>0.0026 lb/ton (0.0086 lb per 1000 gal) of ethanol produced</td></tr> </table>	Fugitive PM:	0.1334 lb/ton (0.4387 lb per 1000 gal) of ethanol produced	Fugitive PM ₁₀ :	0.0260 lb/ton (0.0856 lb per 1000 gal) of ethanol produced	Fugitive PM _{2.5} :	0.0026 lb/ton (0.0086 lb per 1000 gal) of ethanol produced														
Fugitive PM:	0.1334 lb/ton (0.4387 lb per 1000 gal) of ethanol produced																				
Fugitive PM ₁₀ :	0.0260 lb/ton (0.0856 lb per 1000 gal) of ethanol produced																				
Fugitive PM _{2.5} :	0.0026 lb/ton (0.0086 lb per 1000 gal) of ethanol produced																				

ATTACHMENT A:
DETAILS OF EQUIPMENT / ACTIVITIES COVERED UNDER THIS FACILITY-WIDE PERMIT

AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls																				
007	<p>Emission Point Description: VOC equipment leaks from process equipment</p> <p>Controlled Emission Factor Summary: Fugitive VOC: 0.1388 lb per ton (0.4563 lbs/1000 gallons) of ethanol produced Fugitive Acetaldehyde: 0.0082 lb per ton (0.0270 lbs/1000 gallons) of ethanol produced</p> <p>Annual Emission limits Fugitive VOC: 13.7 ton Fugitive Acetaldehyde: 0.8 ton</p> <p>Controls: Leak detection and repair: monthly monitoring for equipment leaks for valves and pumps. No leak detection for flanges required other than the NSPS V Va requirements.</p> <p>Specific Requirements/Regulations: 40 C.F.R. Part 60, Subpart V Va, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced after November 7, 2006.</p> <p>Note (1): % control is based on monthly leak detection program as described in Protocol for Equipment Leak Emission Estimates (AP 42 – chapter 5) and applies to valves in light liquid or gas/vapor service and pumps in light liquid service.</p> <p>Note: (2): Emissions are based on the following equipment inventory:</p> <table><tr><th>Component</th><th>Count</th><th>% Control</th><th>LDAR emission factor</th></tr><tr><td>Light liquid valves</td><td>327</td><td>84</td><td>0.00403 kg/hr/source</td></tr><tr><td>Light liquid pumps</td><td>27</td><td>69</td><td>0.0199 kg/hr/source</td></tr><tr><td>Gas valves</td><td>55</td><td>87</td><td>0.00597 kg/hr/source</td></tr><tr><td>Flanges</td><td>545</td><td>0</td><td>0.00183 kg/hr/source</td></tr></table>	Component	Count	% Control	LDAR emission factor	Light liquid valves	327	84	0.00403 kg/hr/source	Light liquid pumps	27	69	0.0199 kg/hr/source	Gas valves	55	87	0.00597 kg/hr/source	Flanges	545	0	0.00183 kg/hr/source
Component	Count	% Control	LDAR emission factor																		
Light liquid valves	327	84	0.00403 kg/hr/source																		
Light liquid pumps	27	69	0.0199 kg/hr/source																		
Gas valves	55	87	0.00597 kg/hr/source																		
Flanges	545	0	0.00183 kg/hr/source																		

ATTACHMENT A:
DETAILS OF EQUIPMENT / ACTIVITIES COVERED UNDER THIS FACILITY-WIDE PERMIT

AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls
008	<p>Emission Point Description: Operation of a biomethanator (an anaerobic biological water treatment system). The biomethanator's off-gas vents to the flare.</p> <p>Controlled Emission Factor Summary: Oxides of Nitrogen: 0.0198 lbs/ton (0.0650 lb per 1,000 gallons) of denatured ethanol VOC: 0.0148 lbs/ton (0.0487 lb per 1,000 gallons) of denatured ethanol Carbon Monoxide: 0.1055 lbs/ton (0.3470 lb per 1,000 gallons) of denatured ethanol</p> <p>Annual Emission Limits Oxides of Nitrogen : 1.95 tons VOC: 1.46 tons Carbon Monoxide: 10.4 tons</p> <p>Controls: Flare (John Zink, model ZTOF, serial number VC-9040452)</p> <p>Specific Requirements/Regulations: Regulation No. 6, Part B, Section VII, Standards of Performance for Incinerators. Note: per PS Memo 99-02, only the opacity standard applies.</p>

ATTACHMENT A:
DETAILS OF EQUIPMENT / ACTIVITIES COVERED UNDER THIS FACILITY-WIDE PERMIT

AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls
009	<p>Emission Point Description: Denatured ethanol loadout by railcar or truck.</p> <p>Controlled Emission Factor Summary:</p> <p>Rail Car loading VOC: 0.1345 lbs/ton (0.4423 lb per 1,000 gal.) of denatured ethanol loaded</p> <p>Truck Loading VOC: 0.0316 lbs/ton (0.1040 lb per 1,000 gal.) of denatured ethanol loaded Oxides of Nitrogen 0.0049 lbs/ton (0.0161 lb per 1,000 gal.) of denatured ethanol loaded Carbon monoxide 0.0243 lbs/ton (0.0800 lb per 1,000 gal.) of denatured ethanol loaded</p> <p>Annual Emission limits: (based on 100 % rail car loadout) VOC: 13.3 ton Oxides of Nitrogen 0.48 ton Carbon monoxide 2.4 /ton</p> <p>Controls: Flare for control of loadout emissions (ICM/Phoenix, serial number #E-228-090105)</p> <p>Specific Requirements/Regulations: Regulation No. 6, Part B, Section VII, Standards of Performance for Incinerators. Note: per PS Memo 99-02, only the opacity standard applies.</p>
010	<p>Emission Point Description: Wet distillers grains and solubles (WDGS) loadout and storage.</p> <p>Controlled Emission Factor Summary: Volatile Organic Compounds: 0.0114 lb per ton of WDGS Acetaldehyde: 0.0024 lb per ton of WDGS</p> <p>WDGS throughput = 510,000 tons per year</p> <p>Annual Emission limits: Volatile Organic Compounds: 2.9 tons of WDGS Acetaldehyde: 0.61 tons of WDGS</p> <p>Controls: None</p>

ATTACHMENT A:
DETAILS OF EQUIPMENT / ACTIVITIES COVERED UNDER THIS FACILITY-WIDE PERMIT

AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls														
011	<p>Emission Point Description: Cooling tower consisting of four (4) cooling cells.</p> <p>Controlled Emission Factor Summary:</p> <table> <tr> <td>Particulate Matter:</td> <td>0.0666 lbs/ton (0.2192 lbs per 1,000 gal) of denatured ethanol</td> </tr> <tr> <td>Particulate Matter < 10 µ:</td> <td>0.0666 lbs/ton (0.2192 lbs per 1,000 gal) of denatured ethanol</td> </tr> <tr> <td>Particulate Matter < 2.5 µ:</td> <td>0.0666 lbs/ton (0.2192 lbs per 1,000 gal) of denatured ethanol</td> </tr> <tr> <td>Volatile Organic Compounds:</td> <td>0.0109 lbs/ton (0.0360 lb per 1,000 gal) of denatured ethanol</td> </tr> </table> <p>Annual fugitive emission limits</p> <table> <tr> <td>Particulate Matter:</td> <td>6.6 ton</td> </tr> <tr> <td>Particulate Matter < 10 µ:</td> <td>6.6 ton</td> </tr> <tr> <td>Volatile Organic Compounds:</td> <td>1.08/ton</td> </tr> </table> <p>Controls:</p> <p style="padding-left: 40px;">None</p>	Particulate Matter:	0.0666 lbs/ton (0.2192 lbs per 1,000 gal) of denatured ethanol	Particulate Matter < 10 µ:	0.0666 lbs/ton (0.2192 lbs per 1,000 gal) of denatured ethanol	Particulate Matter < 2.5 µ:	0.0666 lbs/ton (0.2192 lbs per 1,000 gal) of denatured ethanol	Volatile Organic Compounds:	0.0109 lbs/ton (0.0360 lb per 1,000 gal) of denatured ethanol	Particulate Matter:	6.6 ton	Particulate Matter < 10 µ:	6.6 ton	Volatile Organic Compounds:	1.08/ton
Particulate Matter:	0.0666 lbs/ton (0.2192 lbs per 1,000 gal) of denatured ethanol														
Particulate Matter < 10 µ:	0.0666 lbs/ton (0.2192 lbs per 1,000 gal) of denatured ethanol														
Particulate Matter < 2.5 µ:	0.0666 lbs/ton (0.2192 lbs per 1,000 gal) of denatured ethanol														
Volatile Organic Compounds:	0.0109 lbs/ton (0.0360 lb per 1,000 gal) of denatured ethanol														
Particulate Matter:	6.6 ton														
Particulate Matter < 10 µ:	6.6 ton														
Volatile Organic Compounds:	1.08/ton														