

# STATE OF COLORADO

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



## CONSTRUCTION PERMIT

60

PERMIT NO: 06YU0214

DATE ISSUED: June 20, 2008

ISSUED TO: Yuma Ethanol, LLC

**INITIAL APPROVAL**

Modification #1

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

Denatured ethanol manufacturing plant located ½ mile south of East 8<sup>th</sup> Avenue (also U.S. Highway 34) and ½ mile east of County Road H in Yuma, Yuma 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 During the first twelve (12) months of operation, after the ethanol production exceeds 50,000,000 gallons per year, compliance with both the quarterly and yearly production limitations shall be required. After the first twelve (12) months of operation, compliance with only the yearly limitation shall be required. Compliance with the yearly emission limits shall be determined on a rolling twelve (12) month total.

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. (Reference: Regulation No. 3, Part B, Section II.A.4).

2.2.1 Production of denatured ethanol shall not exceed 15,000,000 gallons per quarter and 60,000,000 gallons per year. (AIRs Points 004, 005, 008 & 011)

2.2.2 Receiving of denaturant (gasoline) shall not exceed 750,000 gallons per quarter and 3,000,000 gallons per year. (AIRS Point 011)

2.2.3 Production of Wet Distillers Grains and Solubles (WDGS) shall not exceed 127,500 tons(dry weight) per quarter and 510,000 tons (dry weight) per year. (AIRS Point 005).

PC.2.3 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.)

2.3.1 Receiving of corn shall not exceed 150,000 tons per quarter and 600,000 tons per year. (AIRs Points 002)

2.3.2 Milling of corn shall not exceed 150,000 tons per quarter and 600,000 tons per year. (AIRs Point 003)

2.3.3 Consumption of natural gas in the 159 MMBtu/hr, firetube boiler shall not exceed 348.2 million standard cubic feet (MMScf) per quarter and 1,392.8 MMScf per year. (AIRs Point 001)

PC.2.4 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:	8.11 tons per quarter and 32.42 tons per year.
PM10 (Particulate Matter<10 µm):	8.06 tons per quarter and 32.23 tons per year.
Nitrogen Oxides:	18.21 tons per quarter and 72.83 tons per year.
Volatile Organic Compounds:	24.76 tons per quarter and 99.01 tons per year.
Carbon Monoxide:	18.14 tons per quarter and 72.53 tons per year.
Individual Hazardous Air Pollutant (HAP)*:	2.0 tons per quarter and 8.0 tons per year.
Acetaldehyde:	2.49 tons per quarter and 9.95 tons per year.
Total of all HAPs:	5.0 tons per quarter and 20.0 tons per year.

\* Except Acetaldehyde

PC.2.5 Emissions from all insignificant activities of Acetaldehyde shall not exceed 100 pounds (0.05 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 Acetaldehyde prior to Final Approval. (Reference: Regulation No. 3, Part B, Section III.G.7)

PC.2.6 Emissions from all insignificant activities of volatile organic compounds shall not exceed 1980 pounds (0.99 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 that emit volatile organic compounds prior to Final Approval. (Reference: Regulation No. 3, Part B, Section III.G.7).

PC.2.7 During the first twelve (12) months of operation, after the ethanol production exceeds 50,000,000 gallons per year, compliance with both the quarterly and yearly consumption limitations shall be required. After the first twelve (12) months of operation, compliance with only the yearly limitation shall be required. Compliance with the yearly emission limits shall be determined on a rolling twelve (12) month total.

PC.2.8 Emissions of fugitive particulate matter (PM) and fugitive particulate matter of less than ten microns (PM<sub>10</sub>) 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	40.26
Fugitive Particulate Matter less than 10 microns (PM-10)	7.86

PC.2.9 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.

PC.2.10 The following conditions apply to: FACILITY BAGHOUSES (Reference: Regulation No. 3, Part B, Section II.A.4)

PC.2.10.1 PM and PM<sub>10</sub> emissions from all grain handling and milling operations shall be captured and controlled by the grain receiving baghouse (AIRs point 002) and the hammermill baghouse (AIRs point 003).

PC.2.10.2 The operations of each baghouse shall be in accordance with the following requirements:

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

2.10.2.2 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.

2.10.2.3 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.

- 2.10.2.4 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.
- 2.10.2.5 Collected waste material from the baghouses shall be handled, transported, and stored properly.
- 2.10.2.6 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.
- 2.10.2.7 The emissions from the grain receiving baghouse (AIRs 002) shall not exceed the following emission limits (3-hour or EPA testing method average).
  - 2.10.2.7.1 3.34 pounds per hour PM/PM-10.
- 2.10.2.8 The emissions from the milling baghouse (AIRs 003) shall not exceed the following emission limits (3-hour or EPA testing method average).
  - 2.10.2.8.1 1.50 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 MM BTU Boiler (AIRs Point 001) 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 NO<sub>2</sub>) in excess of 0.10 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 NOx formation, i.e., higher temperatures, relationship to CO and valve settings that may create more NOx. The plan must discuss the NOx/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(s) may found at:  
<http://www.gpoaccess.gov/cfr/retrieve.html>

PC.3.4 All tanks T61, T62, T63, T64 and T65 (listed under AIRs Point 011, except the Corrosion Inhibitor Tank) 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)
- c. Reporting and Recordkeeping requirements §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(s) may found at:  
<http://www.gpoaccess.gov/cfr/retrieve.html>

PC.3.5 Until production of ethanol exceeds 50,000,000 (fifty million) gallons per year, this source is subject to the New Source Performance Standards requirements of Regulation No. 6, Part A, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry After January 5, 1981 and on or Before November 7, 2006 including, but not limited to, the following:

- 3.5.1 Standards: §60.482-1 through §60.482-10
  - i. The applicant shall perform **monthly** monitoring for equipment leaks using USEPA Method 21 as described in §60.485. (Monthly monitoring will continue to be required in order to apply control efficiencies as listed in the Leak Detection and Repair (LDAR) program).
- 3.5.2 Recordkeeping requirements. §60.486
- 3.5.3 Reporting requirements. §60.487

A copy of the complete applicable subpart(s) may found at:  
<http://www.gpoaccess.gov/cfr/retrieve.html>

PC.3.6 Once production of ethanol exceeds 50,000,000 gallons per year, this source will be 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:

- 3.6.1 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).

3.6.2 Recordkeeping requirements. §60.486a

3.6.3 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.3.7 To demonstrate compliance with the VOC emission control reductions using Leak Detection and Repair (LDAR) for AIRs Point 006, 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 §60.485 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.3.8 Regulation No. 6, Part B, Section III, Standards of Performance for New Manufacturing Processes applies to AIRs Points 002, 003, 004, 005 & 006.
- PC.3.9 Regulation No. 6, Part B, Section II, Standards of Performance for New Fuel Burning Equipment applies to AIRs Point 001.
- PC.3.10 Regulation No. 6, Part B, Section VII, Standards of Performance for Incinerators, applies to flares under AIRs Points 007 & 008. Note: only the opacity standard applies per PS Memo 99-02.
- PC.3.11 The provisions of Regulation No. 7, Section VI.B.2 apply to the Denaturant Tank and Denatured Ethanol #1 & #2 Tanks, 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. 19.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.3.12 The owner or operator shall design, construct, operate and maintain the flare (AIRS Point 007) according to the requirements set out in 40 CFR § 60.18, which include, but are not limited to:

PC.3.12.1 The flare shall be designed for and operated with o 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.3.12.2 The flare shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR § 60.18(f).

PC.3.12.3 An owner/operator has the choice of adhering to either the heat content specifications in 40 CFR § 60.18 c(3)(ii), and the maximum the velocity specifications in 40 CFR § 60.18 C (4), or adhering to the requirements in 40 CFR § 60.18 C (3) (i).

PC.3.12.4 The flare used for the tuck load out shall be steam-assisted, air assisted, or non-assisted, as specified in 40 CFR § 60.18 C(6).

PC.3.12.5 This flare shall be monitored to ensure it is operated and maintained in conformance with the design, as specified in 40 CFR § 60.18(d).

PC.3.12.6 This flare shall be operated at all times when emissions are vented to this flare.

#### *PC.4. Operating & Maintenance Plan*

PC.4.1 Emissions from the truck and rail grain unloading process shall be vented to a baghouse (AIRs Point 002). 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 003). Operating parameters of these control devices shall be identified prior to final approval of this permit and shall include the provisions of PC.2.10. (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 007). 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 shall be vented to a packed-bed scrubber which uses sodium bisulfite (or an equivalent chemical compound) to capture volatile organic compounds. Operating parameters of these control devices 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 vents associated with mash preparation, cooking and conversion, distillation, dehydration and evaporation, and stillage separation shall be vented to a packed-bed scrubber which uses sodium bisulfite (or an equivalent chemical compound) to capture volatile organic compounds. Operating parameters of the control equipment 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 shall be sampled quarterly to determine the total solids 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. (Reference: Regulation No. 3, Part B, Section III.G.7)

PC.4.7 Prior to final approval being issued, the applicant shall submit to the Division for approval an 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 PC. 2.2, 2.3, 2.4, 2.5, 2.6, 2.10, 3.3, 3.4, 3.5, 3.6, 3.7, 3.11, and 3.12 listed above. The operating and maintenance plan shall commence at startup. (Reference: Regulation No. 3, Part B, Section III.G.7.)

*PC.5. Testing Requirements*

PC.5.1 Source compliance tests shall be conducted to measure the emission rate(s) for the pollutants listed below in order to show compliance with PC.2.4. The test protocol must be in accordance with the requirements of the Air Pollution Control Division Compliance Test Manual and shall be submitted to the Division for review and approval at least thirty (30) days prior to testing. No compliance test shall be conducted without prior approval from the Division. Any stack test conducted to show compliance with a monthly or annual emission limitation shall have the results projected up to the monthly or annual averaging time by multiplying the test results by the allowable number of operating hours for that averaging time (Reference: Regulation No. 3, Part B., Section III.G.3)

*For the Grain Handling, Storage and Milling Operations under AIRS Point 002 and 003*

Particulate matter less than 10 microns shall be measured using EPA approved methods for the Unloading Baghouse and the Milling Baghouse. The operator shall submit manufacturer guarantees to the Division for each baghouse specifying that it meets or exceeds a PM10 outlet concentration of 0.005 grains per dry standard cubic foot (dscf).

*For Wet Cake Storage and Handling Operations under AIRS Point 0005:*

Volatile Organic Compounds and Hazardous Air Pollutants shall be measured using either EPA's *Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions"* which involves two EPA test methods: USEPA Method 18 (to quantify emissions of acetaldehyde, acetic acid, acrolein, ethanol, formaldehyde, formic acid, lactic acid, 2-Furaldehyde and methanol) and USEPA Method 25A, OR other Division approved protocols.

*For 159 MMBtu/hour boiler under AIRs Point 001:*

Oxides of Nitrogen using EPA approved methods, such as Method 7E and 10, the NOx emission rate must be less than 0.10 lb of NOx per million Btu and the CO emission rate must less than 0.084 lb of CO per million Btu.

*For the Fermentation (CO2) Scrubber under AIRS Point 004:*

Volatile Organic Compounds and Hazardous Air Pollutants using EPA's *Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions"* which involves two EPA test methods: USEPA Method 18 (to quantify emissions of acetaldehyde, acetic acid, acrolein, ethanol, formaldehyde, formic acid, lactic acid, 2-Furaldehyde and methanol) and USEPA Method 25A.

*For the Process Scrubber under AIRS Point 005:*

Volatile Organic Compounds and Hazardous Air Pollutants using EPA's *Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions"* which involves two EPA test methods: USEPA Method 18 (to quantify emissions of acetaldehyde, acetic acid, acrolein, ethanol, formaldehyde, formic acid, lactic acid, 2-Furaldehyde and methanol) and USEPA Method 25A.

A copy of EPA's *Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions"* is included with this permit.

PC.6. *Other Specific Conditions*

PC.6.1 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.6.2 Within one hundred and eighty days (180) after commencement of operation, compliance with the conditions contained on this permit shall be demonstrated to the Division. It is the permittee's responsibility to self certify compliance with the conditions. Failure to demonstrate compliance within 180 days may result in revocation of the permit. (Information on how to certify compliance was mailed with the permit.)

PC.6.3 The modeled receptor exclusion zone as described in the PM-10 modeling analysis shall be completely enclosed by a fence line and posted with no trespassing signs that preclude public access. This requirement is imposed as a result of the modeled ambient air PM<sub>10</sub> impacts that result from the facility operations. (Reference: Regulation No. 3, Part B, Section III.B.5)


PC.6.4 Stack heights shall not be less than the following heights above ground level:

Emission Point	Minimum Stack Height (ft)
AIRs Point 001, Boiler	45
AIRs Point 002, Unloading Baghouse	40
AIRs Point 003, Milling Baghouse	40
AIRs Point 004, Fermentation Scrubber	45

AIRs Point 005, Process scrubber	45
AIRs Point 007, Load out Flare	36
AIRs Point 008, Biomethanator Flare	30
AIRs Point 009, Cooling Tower	28

PC6.5 Operating Permit (OP) requirements shall apply to this source at any such time that this source becomes major for OP solely by virtue of a relaxation in any permit limitation. Any relaxation that increases the potential to emit above the applicable OP threshold shall require submittal of and issuance of an operating permit, under Regulation No. 3, Part C.

PC6.6 MACT Subpart FFFF – National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing shall apply to this source at any such time that this source becomes major solely by virtue of a relaxation in any permit limitation and shall be subject to all appropriate applicable requirements of that Subpart (Reference: Regulation 8, Part E).

  
Michael Harris, P.E.  
Permit Engineer

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

Permit History:

Initial Approval – modification #1 – this issuance - increase production from 50 MM to 60 MM gallons/year  
Initial approval issued on September 13, 2006



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 exceedance 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/100102aqcccommonprovisionsreg.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 Notice (APEN) associated with this permit is valid for a term of five years. The five-year term for the APEN received with this permit application expires on **August 13, 2012**. A revised APEN shall be submitted no later than 30 days before the five year term expires.
- 5) The following emissions of non-criteria reportable air pollutants are established based upon the material consumptions as indicated in PC.2.4. 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	19,900
Acrolein	A	107-02-8	640
Benzene	A	71-43-2	160
Methanol	C	67-56-1	3,140
Formaldehyde	A	50-00-0	660
Hexane	C	110-54-3	2800

**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 at least thirty days (fifteen days for portable sources) prior to commencement of the permitted operation or activity. Failure to do so is a violation of Section 25-7-114.5(12)(a), C.R.S. and 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 off-property 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 off of the property of the owner or operator.
- c. **Haul Roads** - Any owner or operator of any new or existing haul road which has vehicle traffic exceeding 40 haul vehicles or 200 total vehicles per day (averaged over a 3-day period) from which fugitive particulate emissions will be emitted will be required to use all available practical methods which are technologically feasible and economically reason in order to minimize such emissions in accordance with the requirements of Section III.D of Regulation No. 1.

### Control Measures

- 1. Paved vehicle haul roads shall be swept promptly and at a minimum weekly to remove any accumulated dirt or mud from the roadway.
- 2. The paved haul roads silt loading shall not exceed 1.15 g/m<sup>2</sup>
- 3. Compliance with the silt loading limitation in Control measure 2 shall be demonstrated by a silt loading performance test conducted at least once per calendar quarter for the first 12 months after ethanol production first exceeds 50 million gallons per year.
- 4. Paved haul roads shall be inspected daily to insure that there are no accumulations of dirt and/or debris.

**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><b>Emission Point Description:</b>            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 heat input and fired only on natural gas and emergency firewater pump.</p> <p><b>Emission Factor Summary:</b></p> <table> <tr> <td colspan="2"><i>Natural Gas Combustion:</i></td> </tr> <tr> <td>Particulate Matter:</td> <td>7.6 pounds per MMScf</td> </tr> <tr> <td>Particulate Matter &lt; 10 µm (PM<sub>10</sub>):</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>1.80 pounds per MMScf</td> </tr> <tr> <td>Formaldehyde</td> <td>0.075 pounds per MMScf</td> </tr> </table> <p><b>Specific Requirements/Regulations:</b>            Standard for Particulate Matter of Regulation No. 6, Part B, II.C., Standards of Performance for New Fuel-Burning Equipment.</p> <p>40 C.F.R. Part 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.</p>	<i>Natural Gas Combustion:</i>		Particulate Matter:	7.6 pounds per MMScf	Particulate Matter < 10 µm (PM <sub>10</sub> ):	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	1.80 pounds per MMScf	Formaldehyde	0.075 pounds per MMScf
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AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls
002/003	<p><b>Emission Point Description:</b>          Corn receiving, scalping, storage, handling, and milling; and trash corn loadout. Equipment includes two (2) hammermills (make, model, and serial number shall be submitted to the Division prior to Final Approval).</p> <p><b>Controlled Emission Factor Summary:</b></p> <p>Particulate Matter: 0.0678 lbs per ton of corn scalped, received and/or stored.          Particulate Matter &lt; 10 µm: 0.0678 lbs per ton of corn scalped, received and/or stored.</p> <p><b>Controls:</b></p> <p>One (1) baghouse (make, model, and serial number shall be submitted to the Division prior to Final Approval) for control of pit operations (corn receiving).</p> <p>One (1) baghouse (make, model, and serial number shall be submitted to the Division prior to Final Approval) for control of process operations (internal handling, storage, scalping, and dry milling of the corn).</p> <p><b>Specific Requirements/Regulations:</b>          Regulation No. 6, Part B, Section III, Standards of Performance for New Manufacturing Processes</p>
004	<p><b>Emission Point Description:</b>  <i>Ethanol production:</i> Fermentation process consisting of fermentation and yeast preparation tanks.</p> <p><b>Controlled Emission Factor Summary:</b></p> <p>PM: 0.0107 lbs/1,000 gallons or 0.0032 lbs/ton of ethanol produced          PM<sub>10</sub>: 0.0054 lbs/1,000 gallons or 0.0017 lbs/ton of ethanol produced          VOCs: 1.085 lbs/1,000 gallons or 0.3298 lbs/ton of ethanol produced          Acetaldehyde: 0.2300 lbs/1,000 gallons or 0.0699 lbs/ton of ethanol produced          Acrolein: 0.0077 lbs/1,000 gallons or 0.0023 lbs/ton of ethanol produced          Methanol: 0.0200 lbs/1,000 gallons or 0.0061 lbs/ton of ethanol produced</p> <p><b>Controls:</b></p> <p>One (1) single pass, packed-bed ICM scrubber known as the CO<sub>2</sub> or Fermentation Scrubber which includes sodium bisulfite injection (or equivalent chemical treatment) to control VOC and HAP emissions. This unit controls VOC emissions produced from the fermentation process.</p> <p><b>Specific Requirements/Regulations:</b>          Regulation No. 6, Part B, Section III, Standards of Performance for New Manufacturing Processes.</p>

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AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls												
005	<p><b>Emission Point Description:</b>          Process vent header system: process vents associated with mash preparation, cooking and conversion, distillation, dehydration and evaporation, and stillage separation.</p> <p><b>Controlled Emission Factor Summary:</b></p> <table> <tr> <td>PM:</td> <td>0.0027 lbs/1,000 gallons or 0.0008 lbs/ton of ethanol produced</td> </tr> <tr> <td>PM<sub>10</sub>:</td> <td>0.0014 lbs/1,000 gallons or 0.0004 lbs/ton of ethanol produced</td> </tr> <tr> <td>VOCs:</td> <td>1.085 lbs/1,000 gallons or 0.3298 lbs/ton of ethanol produced</td> </tr> <tr> <td>Acetaldehyde:</td> <td>0.0700 lbs/1,000 gallons or 0.0213 lbs/ton of ethanol produced</td> </tr> <tr> <td>Acrolein:</td> <td>0.0013 lbs/1,000 gallons or 0.0004 lbs/ton of ethanol produced</td> </tr> <tr> <td>Methanol:</td> <td>0.0263 lbs/1,000 gallons or 0.0080 lbs/ton of ethanol produced</td> </tr> </table> <p><b>Controls:</b>          One (1) single pass, packed-bed ICM scrubber known as the Process Scrubber which includes sodium bisulfite injection (or equivalent chemical treatment) to control VOC and HAP emissions. This unit controls VOC emissions from the process vent header system.</p> <p><b>Specific Requirements/Regulations:</b>          Regulation No. 6, Part B, Section III, Standards of Performance for New Manufacturing Processes.</p>	PM:	0.0027 lbs/1,000 gallons or 0.0008 lbs/ton of ethanol produced	PM <sub>10</sub> :	0.0014 lbs/1,000 gallons or 0.0004 lbs/ton of ethanol produced	VOCs:	1.085 lbs/1,000 gallons or 0.3298 lbs/ton of ethanol produced	Acetaldehyde:	0.0700 lbs/1,000 gallons or 0.0213 lbs/ton of ethanol produced	Acrolein:	0.0013 lbs/1,000 gallons or 0.0004 lbs/ton of ethanol produced	Methanol:	0.0263 lbs/1,000 gallons or 0.0080 lbs/ton of ethanol produced
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AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls																				
006	<p>Emission Point Description: VOC equipment leaks from process equipment</p> <p>Controlled Emission Factor Summary: Fugitive VOC: 0.3423 lb per 1,000 gallons or 0.1041 lbs/ton of ethanol produced Acetaldehyde: 0.0531 lb per 1,000 gallons or 0.0161 lbs/ton of ethanol produced</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><td><u>Component</u></td><td><u>Count</u></td><td><u>% Control</u></td><td><u>LDAR emission factor</u></td></tr><tr><td>Light liquid valves</td><td>246</td><td>84</td><td>0.00403 kg/hr/source</td></tr><tr><td>Light liquid pumps</td><td>20</td><td>69</td><td>0.0199 kg/hr/source</td></tr><tr><td>Gas valves</td><td>44</td><td>87</td><td>0.00597 kg/hr/source</td></tr><tr><td>Flanges</td><td>409</td><td>0</td><td>0.00183 kg/hr/source</td></tr></table> <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. Specific Requirements/Regulations:</p>	<u>Component</u>	<u>Count</u>	<u>% Control</u>	<u>LDAR emission factor</u>	Light liquid valves	246	84	0.00403 kg/hr/source	Light liquid pumps	20	69	0.0199 kg/hr/source	Gas valves	44	87	0.00597 kg/hr/source	Flanges	409	0	0.00183 kg/hr/source
<u>Component</u>	<u>Count</u>	<u>% Control</u>	<u>LDAR emission factor</u>																		
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AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls
007	<p>Emission Point Description: Denatured ethanol loadout by railcar or truck.</p> <p>Controlled Emission Factor Summary:</p> <p><i>Truck loading:</i> Volatile Organic Compounds: 0.095 lb per 1,000 gals. of denatured ethanol loaded</p> <p><i>Railcar loading:</i> Volatile Organic Compounds: 0.266 lb per 1,000 gals. of denatured ethanol loaded</p> <p><i>Flare:</i>            Oxides of Nitrogen: 0.068 lb per MMBtu (for operating flare only)            Oxides of Nitrogen: 0.098 lb per MMBtu (for pilot flare only)            VOCs: 0.052 lb per MMBtu (for operating flare only)            VOCs: 0.054 lb per MMBtu (for pilot flare only)            Carbon Monoxide: 0.37 lb per MMBtu (for operating flare only)            Carbon Monoxide: 0.082 lb per MMBtu (for pilot flare only)</p> <p>Controls:            Flare for control of truck loadout emissions (Make, Model, and Serial Number shall be submitted to the Division prior to Final Approval)</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>
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: 0.068 lb per MMBtu            VOCs: 0.052 lb per MMBt            Carbon Monoxide: 0.37 lb per MMBtu</p> <p>Controls:            Flare (Make, Model, and Serial Number shall be submitted to the Division prior to Final Approval)</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>



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AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls				
009	<p>Emission Point Description: Cooling tower consisting of three (3) cooling cells.</p> <p>Controlled Emission Factor Equation: Emission Rate = Circulation Rate * Drift Rate * TDS Concentration</p> <p>The annual emissions from this point were based on a circulation rate of 1,200,000 gallons per hour, a TDS concentration of 2,500 ppm, and a drift rate of 0.005%.</p> <p>Controlled Emission Factor Summary:</p> <table border="0"> <tr> <td>Particulate Matter:</td> <td>0.0091 lbs per gallon of water circulated</td> </tr> <tr> <td>Particulate Matter less than 10 microns:</td> <td>0.0091 lbs per gallon of water circulated</td> </tr> </table> <p>Controls: None</p>	Particulate Matter:	0.0091 lbs per gallon of water circulated	Particulate Matter less than 10 microns:	0.0091 lbs per gallon of water circulated
Particulate Matter:	0.0091 lbs per gallon of water circulated				
Particulate Matter less than 10 microns:	0.0091 lbs per gallon of water circulated				
010	<p>Emission Point Description: In plant paved roads</p> <p>Controlled Emission Factor Summary:</p> <table border="0"> <tr> <td>Fugitive PM:</td> <td>1.59 lbs per vehicle mile traveled</td> </tr> <tr> <td>Fugitive PM<sub>10</sub>:</td> <td>0.31 lbs per vehicle mile traveled</td> </tr> </table> <p>These emission factors are based on silt loading factor of 1.15 grams per square meter, a mean vehicle weight of 27.56 tons, and a VMT of 50,530 miles per year.</p> <p>These emissions are addressed in PC.2.7 and are not included in the emission limitations in PC.2.5.</p>	Fugitive PM:	1.59 lbs per vehicle mile traveled	Fugitive PM <sub>10</sub> :	0.31 lbs per vehicle mile traveled
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Fugitive PM <sub>10</sub> :	0.31 lbs per vehicle mile traveled				

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AIRS ID #	Description includes: Equipment/Activity, Make, Model Number, Serial Number, Controls
011	<p><b>Emission Point Description:</b>            Five (5) VOL storage tanks:</p> <p>One (1) 100,000 gallon capacity internal floating roof tank identified as the 190 Proof Tank (T65). This tank provides storage of off-specification ethanol. VOC emissions are vented to the atmosphere. This tank shall 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 T63). This tank provides temporary storage of the daily production of ethanol. VOC emissions are vented to the atmosphere. This tank shall 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 &amp; #2 Tanks (T61 and T62). These tanks provide storage of a 95% ethanol / 5% gasoline mixture (denatured ethanol). VOC emissions are vented to the atmosphere. These tanks shall 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 (T64). This tank provides storage of gasoline (RVP 10). VOC emissions are vented to the atmosphere. This tank shall 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><b>Controlled Emission Factor Summary:</b></p> <p>VOC: 0.0823 lbs per 1,000 gallons or 0.254 lbs/ton of denatured ethanol produced</p> <p><b>Specific Requirements/Regulations:</b>            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 &amp; #2 Tanks are subject to the provisions of Regulation No. 7, Section VI.B.2.</p>