

Bryan W. Shaw, Ph.D., *Chairman*
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Mark R. Vickery, P.G., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 29, 2011

MR TREY STUTTS
VICE PRESIDENT
HEREFORD RENEWABLE ENERGY LLC
PO BOX 7000
EL DORADO AR 71731-7000

Re: Permit Amendment Application
Permit Number: 75818
Fuel Grade Ethanol Manufacturing Facility
Hereford, Deaf Smith County
Regulated Entity Number: RN104607833
Customer Reference Number: CN603725417

Dear Mr. Stutts:

This is in response to your letter received October 1, 2010 and your Form PI-1 (General Application for Air Preconstruction Permits and Amendments) concerning the proposed amendment to Permit Number 75818. We understand that you propose to authorize as built changes to the facility. Also, this will acknowledge that your application for the above-referenced amendment is technically complete as of March 21, 2011.

As indicated in Title 30 Texas Administrative Code § 116.116(b) and § 116.160 [30 TAC § 116.116(b) and § 116.160], and based on our review, Permit Number 75818 is hereby amended. This information will be incorporated into the existing permit file. Enclosed are revised special conditions pages and a maximum allowable emission rates table to replace those currently attached to your permit. We appreciate your careful review of the special conditions of the permit and assuring that all requirements are consistently met.

No planned maintenance, startup, and shutdown emissions have been reviewed or represented in this application and none are authorized by this permit.

This amendment will be automatically void upon the occurrence of any of the following, as indicated in 30 TAC § 116.120(a):

1. Failure to begin construction of the changes authorized by this amendment within 18 months from the date of this authorization.

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2. Discontinuance of construction of the changes authorized by this amendment for a period of 18 consecutive months or more.
3. Failure to complete the changes authorized by this amendment within a reasonable time.

Upon request, the executive director may grant extensions as allowed in 30 TAC § 116.120(b).

As of July 1, 2008, all analytical data generated by a mobile or stationary laboratory in support of compliance with air permits must be obtained from a NELAC (National Environmental Laboratory Accreditation Conference) accredited laboratory under the Texas Laboratory Accreditation Program or meet one of several exemptions. Specific information concerning which laboratories must be accredited and which are exempt may be found in 30 TAC § 25.4 and § 25.6.

For additional information regarding the laboratory accreditation program and a list of accredited laboratories and their fields of accreditation, please see the following Web site:

www.tceq.texas.gov/compliance/compliance_support/qa/env_lab_accreditation.html

For questions regarding the accreditation program, you may contact the Texas Laboratory Accreditation Program at (512) 239-3754 or by e-mail at labprgms@tceq.texas.gov.

You may file a **motion to overturn** with the Chief Clerk. A motion to overturn is a request for the commission to review the executive director's decision. Any motion must explain why the commission should review the executive director's decision. According to 30 TAC § 50.139, an action by the executive director is not affected by a motion to overturn filed under this section unless expressly ordered by the commission.

A motion to overturn must be received by the Chief Clerk within 23 days after the date of this letter. An original and 11 copies of a motion must be filed with the Chief Clerk in person, or by mail to the Chief Clerk's address on the attached mailing list. On the same day the motion is transmitted to the Chief Clerk, please provide copies to the applicant, the executive director's attorney, and the Public Interest Counsel at the addresses listed on the attached mailing list. If a motion to overturn is not acted on by the commission within 45 days after the date of this letter, then the motion shall be deemed overruled.

You may also request **judicial review** of the executive director's approval. According to Texas Health and Safety Code § 382.032, a person affected by the executive director's approval must file a petition appealing the executive director's approval in Travis County district court within 30 days after the effective date of the approval. Even if you request judicial review, you still must exhaust your administrative remedies, which includes filing a motion to overturn in accordance with the previous paragraphs.

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Your cooperation in this matter is appreciated. If you need further information or have any questions, please contact Mr. David Reyna at (512) 239-6051 or write to the Texas Commission on Environmental Quality, Office of Permitting and Registration, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,



Steve Hagle, P.E., Director
Air Permits Division
Office of Permitting and Registration
Texas Commission on Environmental Quality

SH/DR/

Enclosures

cc: Air Section Manager, Region 1 - Amarillo

Project Number: 160486

SPECIAL CONDITIONS
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EMISSION STANDARDS

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit.
2. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations in Title 40 Code of Federal Regulations (40 CFR) Part 60, Subparts A, Db, Kb, and VV on Standards of Performance for Industrial Steam Generating Units, New Stationary Sources promulgated for Volatile Organic Liquid Storage Vessels, for Equipment Leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemicals Manufacturing Industry (SOCMI).

OPERATIONAL LIMITATIONS

3. Emission rates are based on and the facilities are limited to the following: (03/11)

<u>Source Name</u>	<u>Maximum Hourly Throughput</u>	<u>Annual (12 Month Rolling) Throughput</u>
Ethanol Production	13,700 gallons	120,000,000 gallons
Grain Receiving	1,120 tons	1,200,300 tons
Denatured Ethanol Loadout (Truck)	36,000 gallons	120,000,000 gallons*
Denatured Ethanol Loadout (Rail)	420,000 gallons	120,000,000 gallons*

*Total of rail and truck throughput is limited to 120,000,000 gallons annually

4. Particulate matter grain loading shall not exceed 0.004 grains per dscf of air from the vents Emission Point Nos. [EPNs] A1, B2, and D4 . There shall be no visible emissions exceeding 30 seconds in any six-minute period as determined using the U.S. Environmental Protection Agency (EPA) Test Method (TM) 22.

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The vents covered by this permit shall not operate unless control devices and associated equipment are maintained in good working order and operating. All vents will be inspected for visible emissions once per day and a spare-parts filter inventory will be maintained on site. Records shall be maintained of all inspections and maintenance performed. **(08/08)**

- A. Air will be pulled from all grain handling areas including the railcar receiving area and grain storage silos and routed to the grain receiving baghouse (EPN A1). **(08/08)**
 - B. The railcar receiving area, where suction is being pulled, will be enclosed except for railcar entry and exit points.
 - C. All loadout devices (augers, drop spouts, etc.) will be equipped with drop socks at the drop point to minimize fugitive emissions from loadout areas.
 - D. Spillage of any raw products, finished products, or waste products will be picked up and properly disposed of on a daily basis.
 - E. Plant roads and other traffic areas shall be paved or if unpaved shall be sprinkled with water and/or environmentally sensitive chemicals to maintain compliance with all TCEQ rules and regulations. **(03/11)**
 - F. Stationary equipment, stockpiles, or vehicles used for the operation of the ethanol production plant (except for incidental traffic and the entrance and exit to the site) shall not be located or operated closer than 25 feet from the site property line. **(08/08)**
5. The handling and storage of boiler ash shall comply with the following requirements: **(08/08)**
- A. All ash hopper silos (EPNs ASH-1 and ASH-2) shall be equipped with a fabric filter baghouse that will control particulate grain loading to 0.004 grains/scf..
 - B. The ash loadout area shall be enclosed on three sides.
 - C. Material discharged from the ash hopper silos into open bed vehicles shall contain, at a minimum, 5% moisture to minimize emissions.
 - D. Ash production at this facility shall be limited to 63,000 lbs/hr and 277,000 tons per year.

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- E. The ash open storage area shall be limited to 5.25 acres located no more than 0.2 miles from the ash loadout area.
 - F. Water sprays shall be installed as necessary at the ash open storage area to achieve maximum control of particulate emissions.
6. The handling and storage of limestone and hydrated lime shall comply with the following requirements: **(08/08)**
- A. All limestone and hydrated lime storage silos (EPNs LSS and HLS) shall be equipped with a fabric filter baghouse that will control particulate grain loading to 0.01 grains/scf.
 - B. The exhaust flow rate of the bin filters shall not exceed 1400 cfm.
 - C. The unloading of limestone and hydrated lime shall be transferred from trucks to the respective storage silos pneumatically. The transfer of limestone shall be limited to 9,700 tons/year and the transfer of hydrated lime shall be limited to 7,700 tons/year.
 - D. Records shall be maintained to include the throughputs of lime and hydrated lime to the corresponding storage silos.
7. Storage tanks are subject to the following requirements. The control requirements specified in paragraphs A through D of this condition shall not apply (1) where the volatile organic compounds (VOC) has an aggregate partial pressure of less than 0.50 pound per square inch, absolute (psia) at the maximum feed temperature or 95 degrees Fahrenheit (°F), whichever is greater, or (2) to storage tanks smaller than 25,000 gallons.
- A. An internal floating deck or "roof" or equivalent control shall be installed in all tanks. The floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof (IFR): (1) a liquid mounted seal, (2) two continuous seals mounted one above the other, or (3) a mechanical shoe seal.
 - B. An open-top tank containing a floating roof (external floating roof tank) which uses double seal or secondary seal technology shall be an approved control alternative to an IFR tank provided the primary seal consists of either a mechanical shoe seal or a liquid mounted seal and the secondary seal is rim mounted. A weathershield is not approvable as a secondary seal unless specifically reviewed and determined to be vapor tight.

- C. For any tank equipped with a floating roof, the permit holder shall perform the visual inspections and seal gap measurements as specified in Title 40 Code of Federal Regulations ' 60.113b (40 CFR ' 60.116b) Testing and Procedures (as amended at 54 CFR Part 32973, August 11, 1989) to verify fitting and seal integrity. Records shall be maintained of the dates seals were inspected and seal gap measurements made, results of inspections and measurements made (including raw data), and actions taken to correct any deficiencies noted.
- D. The floating roof design shall incorporate sufficient flotation to conform to the requirements of American Petroleum Institute (API) Code 650 dated November 1, 1998, except that an internal floating cover need not be designed to meet rainfall support requirements and the materials of construction may be steel or other materials.
- E. Uninsulated tank exterior surfaces exposed to the sun shall be white or aluminum. Storage tanks must be equipped with permanent submerged fill pipes.
- F. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all storage tanks during the previous calendar month and the past consecutive 12-month period. The record shall include tank identification number, control method used, tank capacity in gallons, name of the material stored, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year to date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures.

Emissions for tanks shall be calculated using the Air NSR Permits: Index of Common Permitted Facilities at
http://www.tceq.state.tx.us/permitting/air/guidance/newsourcereview/nsr_fac_index.html

- 8. Cooling water shall be sampled once a week for total dissolved solids (TDS) and once a day for conductivity. Dissolved solids in the cooling water drift are considered to be emitted as PM10. The data shall result from collection of water samples from the cooling tower feed water and represent the water being cooled in the tower. Water samples should be capped upon collection, and transferred to a laboratory area for analysis. The analysis method for TDS shall be EPA Method 160.1, ASTM D5907, and SM 2540 C [SM - 19th edition of Standard Methods for Examination of Water]. The analysis method for Conductivity shall be ASTM D1125-95A and SM2510 B. Use of an alternative method shall be approved by the TCEQ Regional Director prior to its implementation.
(03/11)

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9. NO_x and CO emissions from each of two Package Boilers, having a common stack (EPN G7), shall not exceed the following: **(08/08)**

0.012 lb NO_x/MMBtu on an hourly average

0.035 lb CO/MMBtu on an hourly average

10. The permit holder shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from EPN E5. The sampling will be used to show compliance with Special Condition No. 12. The permit holder shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from EPNs F6 and G7. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and the EPA Reference Methods and compliance with Special Condition No. 12.

- A. The appropriate TCEQ Regional Office shall be contacted as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

- 1.) Date for pretest meeting.
- 2.) Date sampling will occur.
- 3.) Name of firm conducting sampling.
- 4.) Type of sampling equipment to be used.
- 5.) Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for the test reports. A written proposed description of any deviation from sampling procedures specified in permit conditions, TCEQ, or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director or the TCEQ Office of Compliance and Enforcement (OCE), Compliance Support Division must approve any deviation from specified sampling procedures. Requests to waive testing for

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any pollutant specified in this condition shall be submitted to the TCEQ Office of Permitting, Remediation, and Registration, Air Permits Division.

Test waivers and alternate/equivalent procedure proposals for 40 CFR Part 60 testing which must have EPA approval shall be submitted to the TCEQ OCE, Compliance Support Division.

- B. Air contaminants emitted from EPN F6 to be tested for include (but are not limited to) sulfur dioxide, PM10, nitrogen oxide (NOx), carbon monoxide (CO), hydrochloric acid (HCl), Ammonia (NH3), Arsenic, Cadmium, Chromium, Lead, Mercury, and Selenium. Air contaminants emitted from EPN G7 to be tested for include (but are not limited to) NOx and CO. Air contaminants emitted from EPN E5 to be tested for include (but are not limited to) NOx, oxygen (O2), and CO.
- C. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial start-up of the facilities (or increase in production, as appropriate) and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate TCEQ Regional Office.
- D. The Fluidized Bed Boiler (EPN F6) shall operate at maximum operating rate, and the Regenerative Thermal Oxidizer (RTO) (EPN E5) shall operate at maximum flow rate during stack emission testing. Both package boilers shall operate simultaneously at maximum operating rates. The operating rate/flow rate, temperature, and O2 content shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed firing rate/flow rate range is identified in the test notice specified in paragraph A and accepted by the appropriate TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.
- During subsequent operations, if the maximum operating rate is greater than that recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Permits Division for the region.
- E. During initial testing and subsequent testing (if required by Special Condition No. 24), an analysis shall be performed on the FBB fuel. Sampling shall be conducted at the exit of the baghouse. **(08/08)**

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- F. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled "Chapter 14, Contents of Sampling Reports" of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:
- One copy to the appropriate TCEQ Regional Office.
 - One copy to each local air pollution control program.
 - One copy to the TCEQ OCE, Compliance Support Division in Austin.
11. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of NO_x and CO from EPNs F6 and G7.
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Permitting, Remediation, and Registration, Air Permits Division for requirements to be met.
- B. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; § 2 applies to all other sources:
- 1.) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
 - 2.) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.
- Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive

quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of ± 15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to eight-hour average concentrations at least once every day, using a minimum of four equally-spaced data points from each one hour period. The individual average concentrations shall be reduced to units of pounds per MM Btu at least once every week as follows:
- The measured eight hour average concentration from the CEMS shall be multiplied by the flow rate measured during the latest stack test performed in accordance with Special Condition No. 9 to determine the hourly emission rate.
- D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
- E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
- F. Quality-assured (or valid) data must be generated when EPN F6 is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that EPN F6 operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Director.
12. The Scrubber Unit RTO (EPN E5) shall maintain the VOC concentration in the exhaust gas less than 10 parts per million by volume (ppmv) on a dry basis, corrected to 3 percent O₂, or achieve a VOC reduction efficiency greater than 99 percent. (08/08)

The RTO firebox exit temperature shall be maintained at not less than 1400F and exhaust O₂ concentration not less than 3 percent while waste gas is being fed into the oxidizer prior to initial stack testing. After the initial stack test has been completed, the six-minute average temperature and six minute average O₂ concentration shall be at greater

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than the respective hourly average maintained during the most recent satisfactory stack testing required by Special Condition No. 10.

The RTO exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. The temperature measurement device shall reduce the temperature readings to an averaging period of six minutes or less and record it at that frequency. The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius ($^{\circ}\text{C}$) or $\pm 2.5^{\circ}\text{C}$.

Quality-assured (or valid) data must be generated when the RTO is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the RTO is operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded.

13. The minimum fresh water addition rate into Absorber EPN E5 shall be 100 gallons/minute. The flow rate shall be recorded at least once an hour.
14. The following shall apply to the baghouse vented through EPN F6:
 - A. Particulate emissions including particulate emissions less than 10 microns in diameter shall not exceed 0.01 grains per standard cubic foot. **(08/08)**
 - B. Opacity shall not exceed 10% from EPN F6. **(08/08)**
 - C. The baghouse shall be inspected and maintained in accordance with the manufacturer's recommendations or other written procedures that provide adequate assurance that the equipment will operate as represented.
15. The permit holder shall install, calibrate, operate, and maintain a continuous opacity monitoring system (COMS) to measure and record the opacity from EPN F6. **(08/08)**
 - A. The COMS shall meet 40 CFR Part 60, Appendix B Performance Specification No 1. The initial performance evaluation of the COMS required by the performance specification shall be conducted and passed within 60 days of start-up.
 - B. The COMS shall meet the requirements of 40 CFR § 60.13. The appropriate TCEQ Regional Manager will be the administrator for alternate monitoring requests, except where the monitoring is also required by an applicable New

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Source Performance Standard (NSPS, 40 CFR Part 60) or National Emission Standard for Hazardous Air Pollutants (NESHAP, 40 CFR Parts 61 or 63) where EPA Region 6 remains the administrator for alternate monitoring requests. Alternate monitoring requests should be submitted to the appropriate TCEQ Regional Director and EPA Region 6, when they are the administrator, with copies to any local air pollution programs and the TCEQ Compliance Support Division.

- C. Monitoring data shall be recorded and maintained as specified in 40 CFR § 60.7 (c), (d), (e) and (f).
 - D. The appropriate TCEQ Regional Office and any local air pollution programs shall be notified at least 30 days prior to any required initial performance evaluation.
 - E. Quality-assured (or valid) data must be generated when the Fluidized Bed Boiler is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the Fluidized Bed Boiler is operated over the previous rolling 12-month period.
16. This permit authorizes emissions from the Emergency Fire Water Pump (EPN L11) for Preventative Maintenance and Testing.
- These emissions are subject to the maximum allowable emission rates indicated on the maximum allowable emission rates table. The performance of these activities and the emissions associated with each shall be recorded and the rolling 12-month emissions shall be updated on a monthly basis. The Emergency Fire Water Pump operation is limited to 300 hours per year. Any maintenance, start up, and shutdown activities not in the above list are not authorized by this permit. **(08/08)**
17. This permit authorizes emissions from the Emergency Generator (EPN EG) to provide electrical power during times that the Fluidized Bed Boiler is non-operational. The Emergency Generator operation is limited to 140 hours per year, and the operation and associated emissions shall be recorded and the rolling 12-month emissions shall be updated on a monthly basis. **(08/08)**
18. Piping, Valves, Connectors, Pumps, and Compressors in VOC Service - 28M
- A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.5 psia at 100°F or at maximum process operating temperature if less than 100°F or (2) to piping and valves two inches nominal size and smaller or (3) where the operating pressure is at least 5 kilopascals (0.725 pound per square inch) below ambient pressure. Equipment

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excluded from this condition shall be identified in a list to be made available upon request.

- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute, API, American Society of Mechanical Engineers, or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak checking during plant operation. Non-accessible valves, as defined in 30 TAC Chapter 115, shall be identified in a list to be made available upon request.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring period after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk through.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be closed.

- F. Accessible valves shall be monitored by leak checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

An approved gas analyzer shall conform to requirements listed in 40 CFR §60.485(a)-(b).

- G. Except as may be provided for in the special conditions of this permit, all pump and compressor seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent

emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. Seal systems that prevent emissions may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure or seals degassing to vent control systems kept in good working order.

Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

- H. Damaged or leaking valves, connectors, compressor seals, and pump seals found to be emitting VOC in excess of 10,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Every reasonable effort shall be made to repair a leaking component as specified in this paragraph within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. At the discretion of the TCEQ Executive Director or designated representative, early unit shutdown or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.
- I. The results of the required fugitive instrument monitoring and maintenance program shall be made available to the TCEQ Executive Director or designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of physical inspections are not required unless a leak is detected.
- J. Fugitive emission monitoring required by an applicable New Source Performance Standard (NSPS), 40 CFR Part 60, or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS), 40 CFR Part 61, may be used in lieu of Items F through I of this condition.

Compliance with the requirements of this condition does not assure compliance with requirements of NSPS or NESHAPS and does not constitute approval of alternate standards for these regulations.

- 19. Natural gas combusted at this facility shall be sweet natural gas containing no more than five grains of total sulfur per 100 dry standard cubic feet.
- 20. The Methanator Flare (EPN J9) and the Truck/Rail fuel Loadout Flare (EPN K10) shall be designed and operated in accordance with the following requirements:

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- A. The flare systems shall be designed such that the combined assist natural gas and waste stream to each flare meets the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal, upset, and maintenance flow conditions.

The heating value and velocity requirements shall be satisfied during operations authorized by this permit. Flare testing per 40 CFR § 60.18(f) may be requested by the appropriate TCEQ Regional Office to demonstrate compliance with these requirements.

- B. The flares shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flame shall be continuously monitored by a thermocouple or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.
- C. The flares shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. This shall be ensured by the use of air assist to the flares.
21. There shall be no visible emissions at the property line exceeding 30 seconds in any six minute period as determined using the EPA TM 22 nor nuisance odors at the property line from EPNs MH1, MH2, and MH3.
22. Chemicals may be loaded into tank trucks and railcars under the following conditions: (03/11)
- A. All lines and connectors shall be visually inspected for any defects prior to hookup. Lines and connectors that are visibly damaged shall be removed from service and operations shall cease immediately upon detection of any liquid leaking from the lines or connections.
- B. Each tank truck shall pass vapor-tight testing every 12 months using the methods described in Title 40 Code of Federal Regulations Part 60 (40 CFR 60), Subpart XX. The permit holder shall not allow a tank truck to be filled unless it has passed a leak-tight test within the past year as evidenced by a certificate which shows the date the tank truck last passed the leak-tight test required by this condition and the identification number of the tank truck.
- C. Each railcar shall meet the testing requirements of 49 CFR 180.509(c). The permit holder shall not allow a railcar to be filled unless it has passed the test requirements of 49 CFR 180.509(c). This may be represented by the Department

of Transportation compliant package certificate prominently displaying this information and identification number of the railcar.

- D. All vapors generated from tank truck and railcar loading shall be vented to EPN: K10 (Truck/Rail Fuel Loadout Flare) for control. All railcar and tank truck liquid loading shall be by bottom filling. Liquid splash loading is not allowed for any railcar and tank truck loading at this permitted facility.
23. Concentrations of NH_3 from FBB Stack EPN F6 shall not exceed 115 ppmv on a dry basis on an annual average or 150 parts per million (ppm) on a maximum hourly basis when corrected to 10 percent O_2 at any load except during periods of start-up, shutdown, or maintenance. Concentrations of NO_x from FBB Stack EPN F6 shall not exceed 0.07 lb per million Btu on an annual average. Concentrations of NO_x from Package Boiler EPN G7 shall not exceed 0.01 lb per million Btu on an annual average.
24. The NH_3 concentration in FBB stack EPN F6 shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. The NH_3 concentrations shall be corrected and reported in accordance with Special Condition No. 22.
- A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH_3 .
- B. As an approved alternative, the NH_3 slip may be measured using a sorbent or stain tube device specific for NH_3 measurement in the 0 to 200 ppm range. The frequency of sorbent or stain tube testing shall be daily for the first 60 days of operation, after which, the frequency may be reduced to weekly testing if operating procedures have been developed to prevent excess amounts of NH_3 from being introduced in the SNCR unit and when operation of the SNCR unit has been proven successful with regard to controlling NH_3 slip.
- C. As an approved alternative to sorbent or stain tube testing or NH_3 CEMS, the permit holder may install and operate a dual stream system of NO_x CEMS at the exit of the SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS and the other exhaust stream would be routed through a NH_3 converter to convert NH_3 to NO_x and then to a second NO_x CEMS. The NH_3 slip concentration shall be calculated from the delta between the two NO_x CEMS readings (converted and unconverted).
- D. Any other method that has received prior approval from the TCEQ Compliance and Enforcement Division.

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25. The permit holder shall sample FBB fuel and conduct testing of total chlorine content monthly for 12 months using a method approved by the TCEQ Office of Compliance and Enforcement. If total chlorine content is found to be 50 percent greater than the initial sample, the permit holder shall perform a stack test of EPN F6 for HCl in accordance with the stack testing requirements in Special Condition No. 10. After the initial 12 month testing period, fuel chlorine content sampling shall be conducted annually.

Dated March 29, 2011

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES
Permit Number 75818

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
A1	Grain Receiving Baghouse	PM	1.54	1.23
B2	Grain Receiver Filter	PM	0.02	0.08
C3	Grain Handling/Storage Fugitives	PM	3.62	1.94
		PM ₁₀	1.49	0.81
D4a	Grain Milling Baghouse	PM/PM ₁₀ /PM _{2.5}	0.25	1.08
D4b	Grain Milling Baghouse	PM/PM ₁₀ /PM _{2.5}	0.25	1.08
D4c	Grain Milling Baghouse	PM/PM ₁₀ /PM _{2.5}	0.25	1.08
D4d	Grain Milling Baghouse	PM/PM ₁₀ /PM _{2.5}	0.25	1.08
E5	Regenerative Thermal Oxidizer	NO _x	0.32	1.40
		SO ₂	0.01	0.02
		CO	0.28	1.23
		VOC	0.20	0.89
		PM ₁₀	0.07	0.30
H8	Cooling Tower	PM	0.18	0.77
		PM ₁₀	0.07	0.31
		VOC	0.01	0.01
J9	Methanator Flare	NO _x	0.28	0.11
		CO	1.49	0.41
		VOC	0.21	0.05
		SO ₂	0.01	0.01
K10	Truck/Rail Fuel Loadout Flare	NO _x	3.25	0.50

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
		CO	17.66	2.56
		VOC	15.08	1.32
		SO ₂	0.01	0.01
L11	Emergency Fire Water Pump	NO _x	5.89	0.88
		SO ₂	0.39	0.06
		CO	1.27	0.19
		VOC	0.47	0.07
		PM ₁₀	0.42	0.06
T1	Denatured Ethanol Tank	VOC	0.66	0.69
T3	Gasoline Tank	VOC	1.79	1.86
T4	200 Proof Ethanol Tank	VOC	0.43	0.45
T5	Denatured Ethanol Tank	VOC	0.43	0.49
		HAP	0.01	0.01
T6	Corrosion Inhibitor Tank	VOC	0.01	0.01
P	Wet DGS Storage/Handling	PM	0.03	0.03
		PM ₁₀	0.01	0.01
F6	Fluidized Bed Boiler	NO _x	21.41	
		CO	19.94	
		VOC	3.11	14.00
		SO ₂	18.65	82.00
		PM ₁₀	7.75	34.00
		Arsenic	0.01	0.04
		Cadmium	0.01	0.01
		Chromium	0.06	0.30
		Lead	0.08	0.33
		Mercury	0.01	0.01
		Selenium	0.01	0.01
		HCl	1.97	8.63

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
		NH ₃	41.70	140.00
G7	Package Boilers	NO _x	3.61	
		CO	10.52	
		VOC	1.20	5.27
		SO ₂	1.80	7.90
		PM ₁₀	2.28	10.01
Boilers Emission Cap (5) (EPNs F6 and G7)		NO _x	94.57	
		CO		89.00
FUG1	Fugitives (4)	VOC	1.73	7.56
FUG2	Denatured Ethanol Loading Losses (Truck)	VOC	0.78	0.43
FUG3	Denatured Ethanol Loading Losses (Rail)	VOC	7.02	0.34
MH1	Manure Enclosure (4)	PM	0.02	0.09
		PM ₁₀	0.01	0.04
MH2	Manure Stockpiling (4)	PM	0.02	0.09
		PM ₁₀	0.01	0.04
MH3	Stockpile/Enclosure Transfer (4)	PM	0.02	0.09
		PM ₁₀	0.01	0.04
F	Onsite Ash Storage/Handling	PM	0.41	1.35
		PM ₁₀	0.21	0.66
TKM	Main TK Condenser	PM	0.19	0.81
		PM ₁₀	0.07	0.33
TKR	Regeneration TK Condensor	PM	0.08	0.34
		PM ₁₀	0.03	0.14

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
EG	Emergency Generator	NO _x	3.11	0.22
		CO	2.69	0.19
		VOC	3.11	0.22
		SO ₂	0.96	0.07
		PM ₁₀	0.16	0.01
ASH-1	Ash Silo 1	PM	0.10	0.45
ASH-2	Ash Silo 2	PM	0.10	0.45
LSS	Limestone Silo	PM	0.12	0.02
HLS	Hydrated Lime Silo	PM	0.12	0.02

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.

(2) Specific point source names. For fugitive sources, use an area name or fugitive source name.

(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

HCl - hydrochloric acid

NH₃ - ammonia

NO_x - total oxides of nitrogen

CO - carbon monoxide

SO₂ - sulfur dioxide

PM - particulate matter, suspended in the atmosphere, including PM₁₀.

PM₁₀ - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.

(4) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

(5) Annual NO_x and CO emissions from EPNs F6 and G7 shall not exceed those listed under "Boiler Emission Cap."

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

Hrs/day ____ Days/week ____ Weeks/year or 8,760 Hrs/year

** Compliance with annual emission limits is based on a rolling 12-month period.

Dated March 29, 2011