

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 10, 2013

MR RON DUNBAR
VICE PRESIDENT OF ETHANOL MANUFACTURING
WE HEREFORD LLC
3748 S PROGRESSIVE RD
HEREFORD TX 79045-8515

Re: Permit Alteration
Permit Number: 75702
Ethanol Production Facility
Hereford, Deaf Smith County
Regulated Entity Number: RN105440804
Customer Reference Number: CN604046581

Dear Mr. Dunbar:

This is in response to your letter received May 16, 2013, requesting alteration of the conditions of the above-referenced permit. We understand that you wish to remove the oxygen monitoring requirement for the Regenerative Thermal Oxidizer (EPN S-10) from special conditions 17 and 24 of the permit.

As indicated in Title 30 Texas Administrative Code § 116.116(c) [30 TAC § 116.116(c)], and based on our review, Permit Number 75702 is altered. Enclosed are the altered special conditions and new permit face to replace those currently attached to your permit. Please attach these to your permit.

Planned maintenance, startup, and shutdown emissions have been previously reviewed, authorized, and included in the MAERT. Any other maintenance activities are not authorized by this permit and will need to obtain a separate authorization.

Your cooperation in this matter is appreciated. If you need further information or have any questions, please contact Mr. Thomas Lawshae at (512) 239-2048 or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Mr. Ron Dunbar
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Re: Permit Number: 75702

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality.

Sincerely,



Michael Wilson, P.E., Director
Air Permits Division
Office of Air
Texas Commission on Environmental Quality

MPW/tl

Enclosure

cc: Air Section Manager, Region 1 - Amarillo

Project Number: 193302



**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT**



A Permit Is Hereby Issued To
WE Hereford, LLC
Authorizing the Construction and Operation of
Ethanol Production Facility
Located at Hereford, Deaf Smith County, Texas
Latitude 34° 49' 48" Longitude -102° 21' 52"

Permit: 75702

Revision Date : July 10, 2013

Renewal Date: October 27, 2015


For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code 116.116 (30 TAC 116.116)]
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC 116.120(a), (b) and (c)]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC 116.115(b)(2)(B)(iii)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC 116.115(b)(2)(F)]
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with 30 TAC 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC 116.115(b)(2)(H)]
11. **This permit may not be transferred, assigned, or conveyed by the holder except as provided by rule.** [30 TAC 116.110(e)]
12. **There may be additional special conditions attached to a permit upon issuance or modification of the permit.** Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC 116.115(c)]
13. **Emissions from this facility must not cause or contribute to a condition of "air pollution" as defined in Texas Health and Safety Code (THSC) 382.003(3) or violate THSC 382.085.** If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The permit holder shall comply with all the requirements of this permit.** Emissions that exceed the limits of this permit are not authorized and are violations of this permit.

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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. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the maximum allowable emission rates table (MAERT). Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions.

Operational Limits

3. Emission rates are based on and the facilities are limited to the following:
(09/11)

<u>Source Name</u>	<u>Maximum Hourly Throughput</u>	<u>Maximum Annual Throughput</u>
Grain Receiving	420 tons	1,200,000 tons
Ethanol Production	13,700 gals	120,000,000 gals
Dryer (DDGS* Throughput)	42,000 lbs	97,333 tons
Dryer (MWDGS** Throughput)	184,860 lbs	428,400 tons
Ethanol Loadout (Truck)	36,000 gals	120,000,000 gals
Ethanol Loadout (Rail)	120,000 gals	120,000,000 gals
120,000,000 gals combined for rail and/or truck annual loading		
DDGS* Loadout	300 tons	97,333 tons
MWDGS Loadout	1,320 tons	428,400 tons

* Dried Distillers Grain and Solubles

** Modified Wet Distillers Grain and Solubles

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The facilities covered by this permit are authorized to produce any combination of animal feed co-product including DDGS, MWDGS, and WDGS. The maximum amount of product shipped from the facility will not exceed 997,471 tons. The maximum amount of DDGS produced will not exceed, 97,333 tons per year, and the maximum amount of MWDGS will not exceed 428,000 tons per year based on the potential emissions generated from drying product. Throughputs will be tracked on a 12-month rolling basis. Any combination of animal feed co-product can be generated so long as emissions do not exceed the emission limitations provided in the MAERT attached.

No changes shall be made to the above limitations without prior approval by the Texas Commission on Environmental Quality (TCEQ).

4. As represented in the permit application, the following shall occur:
 - A. Fugitive emissions from the grain receiving pit shall be minimized through the use of "choke feeding." Operation of conveyors associated with receiving shall not commence until the receiving pit is full.
 - B. Four fabric filter baghouses, Receiving Baghouse (Emission Point No. [EPN] S-20), Hammermill Baghouse (EPN S-30), Cooling Baghouse (EPN S-70), and DDGS Loading Baghouse (EPN S-90), properly installed and in good working order, shall control particulate matter emissions from the grain receiving pit, the hammermill, DDGS cooling area, the DDGS loading area, and associated grain handling equipment and achieve an exhaust concentration of no more than 0.005 grain/dry standard cubic feet (dscf) or demonstrate compliance with emission limits on the MAERT.
 - C. All loadout devices (augers, drop spouts, etc.) shall be equipped with drop socks at the drop points or equipped with telescoping down spouts to minimize particulate fugitive emissions from grain loadout areas.
 - D. Vents as represented in the April 20, 2005 application from the fermentation and distillation process equipment shall be directed to a Fermentation Scrubber (EPN S-40). The scrubber shall operate with a 3 one-hour average of 97 percent or no more than 1,000 lbs VOC/million (MM) gals of ethanol in the removal of VOC from these vents.
 - E. Two flares, the Methanator Flare (EPN S-60) and the Truck/Rail Loadout Flare (EPN S-50), shall be used to control the emissions from the methanator and loading of ethanol with a control efficiency of no less than

98 percent as demonstrated by compliance with Title 40 Code of Federal Regulations § 60.18. (40 CFR § 60.18)

- F. A Regenerative Thermal Oxidizer (RTO) (EPN S-10) shall be used to control the VOC and particulate emissions from the DDGS dryers, Facility Identification Numbers D-1 and D-2. The RTO 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 oxygen (O₂) or control dryer VOC with an efficiency of no less than 98 percent and selected Hazardous Air Pollutants (HAPs) with an efficiency of no less than 97 percent. Dryer particulate emissions shall be controlled with an efficiency of no less than 90 percent averaged over a period of one hour.
 - G. Excessive spillage of any raw products, finished products, or waste products shall be picked up and properly disposed of on a daily basis as necessary to maintain compliance with all TCEQ rules and regulations.
 - H. All in-plant roads, truck loading and unloading areas, parking areas, and other traffic areas shall be sprinkled with water, and/or be treated with effective dust suppressant(s), and/or be paved (with a cohesive hard surface) and cleaned as necessary to maintain compliance with all TCEQ rules and regulations.
 - I. The permit holder shall comply with Title 30 Texas Administrative Code § 101.211 (30 TAC § 101.211) for emissions from maintenance, start-up, and shutdown activities.
5. If it is determined by Executive Director of the TCEQ that the current procedures and/or controls are not effective in controlling odors, additional measures shall be implemented.
6. Storage and Loading of VOC
- A. The control requirements specified in paragraphs B through E of this condition shall not apply: (1) where the VOC has an aggregate partial pressure of less than 0.5 pound per square inch, absolute (psia) at the maximum expected operating temperature, or (2) to storage tanks smaller than 25,000 gals.
 - B. 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

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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. Installation of equivalent control requires prior review and approval by the TCEQ Executive Director.

- C. 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.
- D. For any tank equipped with a floating roof, the holder of this permit shall follow 40 CFR § 60.113b, Testing and Procedures, to verify seal integrity. Additionally, the permit holder shall follow 40 CFR § 60.115b, Reporting and Recordkeeping Requirements, to provide records of the dates seals were inspected, seal integrity, and corrective actions taken.
- E. The floating roof design shall incorporate sufficient flotation to conform to the requirements of American Petroleum Institute (API) Code 650, or an equivalent degree of flotation, 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.
- F. Uninsulated tank exterior surfaces exposed to the sun shall be white or aluminum.
- G. For purposes of assuring compliance with VOC emission limitations, the holder of this permit shall maintain a monthly emissions record which describes calculated emissions of VOC from all storage tanks and loading operations. The record shall include tank or loading point identification number, control method used, tank or vessel capacity in gals, name of the material stored or loaded, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, and 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. These records shall be maintained at the plant site for at least two years and be made available to representatives of the TCEQ upon request.

- H. If throughput records are specified in the special conditions of this permit, the holder of this permit may keep such records in lieu of the records required in Paragraph G.
- I. Emissions for tanks and loading operations shall be calculated using: (a) AP 42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" and (b) the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks."
- J. Operation without visible liquid leaks or spills shall be maintained at all loading/unloading facilities, regardless of vapor pressure. This does not apply to momentary dripping associated with the initial connection or disconnection of fittings. Sustained dripping from fittings during loading/unloading operations is not permitted. Any liquid spill that occurs during loading/unloading activities shall be reported pursuant to 30 TAC §§ 101.201, 101.211, and 101.221 and shall be cleaned up immediately to minimize air emissions.
7. Emissions from the Natural Gas-Fire Boilers B-1 and B-2 (EPN S-110A) and (EPN S 110B) shall not exceed: **(10/08)**
- A. Nitrogen oxides (NO_x): 0.02 lb/MMBtu [Million British thermal units per hour] (hourly), high heating value (HHV), or alternatively 18 ppmv (hourly) dry corrected to 3 percent oxygen (O₂). This NO_x performance standard is based on an hourly averaging period and shall only apply at greater than 30 percent firing rate. When operating at or below 30 percent of design firing rate, the boilers shall continue to comply with the NO_x emission limits in pounds per hour (lbs/hr) specified in the MAERT.
- B. The NO_x: 0.015 lb/MMBtu (annual) or 13.5 ppmv (annual) dry corrected to 3 percent O₂. This NO_x performance standard is based on an annual averaging period and shall only apply at greater than 30 percent firing rate. When operating at or below 30 percent of design firing rate, the boilers shall continue to comply with the NO_x emission limits in lbs/hr specified in the MAERT. **(04/13)**
- C. Carbon monoxide (CO): 0.05 lb/MMBtu, HHV, or alternatively, 68 ppmv, dry corrected to 3 percent O₂.

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8. Fuel used in the boilers will be limited to pipeline-quality, sweet natural gas containing no more than 0.25 grain of hydrogen sulfide (H₂S) and 5 grains of total sulfur per 100 dscf, and/or refinery fuel gas containing no more than 10 grains of H₂S per 100 dscf. The natural gas shall be sampled every six months to determine total sulfur and net heating value. Test results from the fuel supplier may be used to satisfy this requirement. Use of any other fuel will require an amendment to the permit.
9. Opacity of emissions from the boilers must not exceed 5 percent averaged over a six minute period except for those periods described in 30 TAC § 111.111.(a)(1)(E).
10. The 300-hp Emergency Fire Water Pump (EPN S-100) shall meet the following specifications: **(08/10)**
 - A. Fuel used in the pump engine shall meet Special Condition No. 8.
 - B. The emergency fire water pump shall be limited to a maximum of 500 non emergency hours per year.
11. Piping, Valves, Connectors, Pumps, and Compressors in VOC Service - 28VHP

Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment:

- A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 (pound per square inch, absolute [psia]) at 68°F, or (2) to piping and valves two inches nominal size and smaller, or (3) operating pressure is at least 5 kilopascals (0.725 psi below ambient pressure. Equipment 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 by 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 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).

Replacements for leaking components shall be re-monitored within 15 days of being placed back into VOC service.

- 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. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent

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control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. 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 or connectors found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump and compressor seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired.
- I. 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.
- J. 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.
- K. Alternative monitoring frequency schedules of 30 TAC §§ 115.352 - 115.359 or National Emission Standards for Organic Hazardous Air Pollutants, 40 CFR Part 63, Subpart H, may be used in lieu of Items F through G of this condition.
- L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants and does not constitute approval of alternative standards for these regulations.

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12. The Biomethanator Flare (EPN S-60) and the Truck/Rail Loadout Flare (EPN S-50) shall be designed and operated in accordance with the following requirements:
 - 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 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 flare 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 flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours.
13. Prior to initial stack testing, the RTO bed temperature (of the second combustion chamber) shall be maintained at not less than 1400°F and the exhaust O₂ concentration not less than 3 percent while waste gas is being fed into the oxidizer. The RTO bed temperature (of the second combustion chamber) shall be monitored and recorded on an hourly basis (hourly average of four readings made every 15 minutes). After the initial stack test has been completed, the six minute average temperature and six-minute average O₂ concentration shall be equal to or greater than the respective hourly average maintained during any satisfactory stack testing required by Special Condition No. 14.

Initial Demonstration of Compliance

14. The holder of this permit 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 the Boilers B-1 and B-2 (EPNs S-110A and S-

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110B) the Fermentation Scrubber (EPN S-40), and the RTO (EPN S-10). The holder of this permit 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 in accordance with the appropriate the U.S. Environmental Protection Agency (EPA) Reference Methods.

- A. The TCEQ Amarillo 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.
- (6) Procedure used to determine boiler and RTO loads during and after the sampling period.

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 submitting the test reports. A written proposed description of any deviation from sampling procedures specified in permit conditions, the TCEQ, or the EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Permitting and Registration, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for NSPS testing which must have EPA approval shall be submitted to the TCEQ Regional Office.

- B. Air contaminants emitted from the RTO to be tested for include (but are not limited to) VOC, the following HAPs, formaldehyde, acetaldehyde, acrolein and methanol, CO, particulate matter (PM), and NO_x. Air contaminants emitted from the boilers to be tested for include (but are not limited to) CO and NO_x. Air contaminants emitted from the fermentation

scrubber to be tested for include (but are not limited to) VOC and the following HAPs, formaldehyde, acetaldehyde, acrolein, and methanol.

- C. Sampling shall occur within 60 days after initial start-up of the facilities 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 TCEQ Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 61 requires EPA approval, and requests shall be submitted to the TCEQ Regional Office.
- D. The boilers shall operate at maximum rated heat duty not to exceed 120 MMBtu/hr each during stack emission testing. The scrubber shall operate at a maximum gas flow rate not to exceed 12,500 actual cubic feet per minute. The RTO and dryers shall operate at a maximum rated heat duty not to exceed 10 MMBtu/hr and 45 MMBtu/hr each, respectively. These conditions/parameters and any other primary operating parameters that affect the emission rate 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 condition/parameter range is identified in the test notice specified in Paragraph A and accepted by the 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 boilers fuel feed rate, dryers' heat duty, or RTO heat duty is greater than, or the fermentation scrubber water flowrate is less than, that recorded during the test period, additional stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Regional Director.
(10/08)

- E. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Amarillo Regional Office.

Continuous Demonstration of Compliance

15. The Natural Gas-Fired Boilers B-1 and B-2 (EPNs S110A and S110B) are limited to a maximum fuel input of 120 MMBtu/hr per boiler. Records of fuel consumption will be kept to demonstrate compliance with this condition. Demonstration of compliance with this condition will also demonstrate compliance with the emission limits of Special Condition No. 7. **(10/08)**
16. The Natural Gas-fired Dryers D-1 and D-2 are limited to a maximum fuel input of 45 MMBtu/hr per dryer. Records of fuel consumption will be kept to demonstrate compliance with this condition.
17. The RTO bed 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. **(07/13)**
 - A. 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 or $\pm 2.5^{\circ}\text{C}$ (5°F).
 - B. 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 judgment and the methods used recorded.
18. The condition of the RTO ceramic fill shall be physically inspected monthly or during normal plant maintenance shutdown to insure that the ceramic has not settled, become plugged, or degraded.
19. The Cooling Tower (EPN S-80) shall meet the following requirements:

The cooling water shall be sampled monthly for total dissolved solids (TDS). Dissolved solids in the cooling water drift are considered to be emitted as PM less

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than 10 microns in size. The sampling method(s) for TDS shall be approved by the TCEQ Regional Office prior to its implementation.

20. Fermentation Scrubber Operation

- A. Prior to the first stack test performed in accordance with Special Condition No. 14, the minimum liquid flow to the scrubbers shall be 60 gals/minute with a minimum addition rate of sodium bisulfite of 3 gals/hr. After the stack testing is completed, the flow and sodium bisulfite concentration shall be at least equal to that maintained during any satisfactory stack test. The circulation rate (or equivalent parameter) shall be monitored and recorded at least once an hour while the scrubbers are operating.
- B. Prior to the first stack test performed in accordance with Special Condition No. 14, the maximum scrubber liquid temperature shall not exceed 90°F. After the stack test has been completed, the temperature shall be no greater than the average temperature maintained during any satisfactory stack test. The liquid temperature may be allowed to increase up to 10°F above that value if satisfactory removal efficiency and emission rates are demonstrated at the higher temperature by using an approved calculation methodology or simulation to ratio stack test results to the higher temperature.
- C. The holder of this permit shall install and maintain a continuous temperature monitor for the scrubber liquid. The temperature shall be recorded at least every six minutes as six-minute averages. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of the reading or 2.5°C (5°F).
- D. Quality-assured (or valid) data must be generated when the scrubber 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 (facility generating emissions) operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a

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redundant continuous emission monitoring system (CEMS), may be required by the TCEQ Regional Director.

21. The permit holder shall install, calibrate, and maintain a CEMS to measure and record the in-stack concentration of NO_x and O₂ from the Boilers B-1 and B-2 (identified as EPNs S-110A and S-110B). A single CEMS may be shared by the two boilers if the CEMS passes the relative accuracy test audit for each boiler when operated in shared mode. **(10/08)**
 - 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 Air, 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 one-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 the permit allowable emission rate in lbs/hr at least once every day and cumulative tons per year on a 12-month rolling average at least once every month.
- 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 the boilers are 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 facility generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment 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.

Federal Applicability

- 22. These facilities shall comply with all applicable requirements of EPA regulations on Standards of Performance for New Stationary Sources promulgated for Volatile Organic Liquid Storage Vessels and Equipment Leaks of VOC's in the

Synthetic Organic Chemicals Manufacturing Industry in 40 CFR Part 60, Subparts A, Kb and VV.

23. The Natural Gas-Fired Boilers B-1 and B-2 (identified as EPNs S-110A and S-110B) will comply with all applicable requirements of EPA regulations on Standards of Performance for New Stationary Sources promulgated for Small Industrial-Commercial-Institutional Steam Generating Units in 40 CFR Part 60, Subparts A and Db. **(10/08)**

Recordkeeping Requirements

24. Records of annual throughputs shall be maintained at this facility and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with Special Condition No. 3. These records shall be totaled for each calendar month, retained for a rolling 24-month period, and include the following along with the records required for the boilers, scrubber, and RTO: **(10/08)**
- A. Ethanol output (gals);
 - B. Grain received (tons);
 - C. DDGS Loaded (tons);
 - D. WDGS Loaded (tons);
 - E. MWDGS Loaded (tons);
 - F. Fuel consumption of each boiler and dryer recorded in cubic feet of natural gas;
 - G. Hours of operation for each baghouse;
 - H. Throughput of all storage tanks;
 - I. Scrubber water flow rates and sodium bisulfite feed rates;
 - J. RTO bed temperatures; and **(07/13)**

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- K. NO_x and O₂ CEMS readings for Boilers B-1 and B-2 (EPNs S110A and S110B).

Maintenance, Startup, and Shutdown (MSS)

25. This permit authorizes the emissions from the planned maintenance, startup, and shutdown (MSS) activities summarized in the MSS Activity Summary (Attachment C) attached to this permit. **(09/11)**

Attachment A identifies the inherently low emitting MSS activities that may be performed at the plant. Emissions from activities identified in Attachment A shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from the activities listed in Attachment A must be revalidated annually. This revalidation shall consist of the estimated emissions for each type of activity and the basis for that emission estimate.

Routine maintenance activities, as identified in Attachment B may be tracked through the work orders or equivalent. Emissions from activities identified in Attachment B shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

The performance of each planned MSS activity not identified in Attachments A or B and the emissions associated with it shall be recorded and include at least the following information:

- A. the process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;
- B. the type of planned MSS activity and the reason for the planned activity;
- C. the common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;
- D. the date and time of the MSS activity and its duration;
- E. the estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it.

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The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis.

26. Process units and facilities, with the exception of pumps, distillation columns, and fermentation vessels and those identified in Special Condition 28 and Attachment A, shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements. **(09/11)**
 - A. The process equipment shall be depressurized to a control device or a controlled recovery system prior to venting to atmosphere, degassing, or draining liquid. Equipment that only contains material that is liquid with VOC partial pressure less than 0.50 psi at the normal process temperature and 95°F may be opened to atmosphere and drained in accordance with paragraph C of this special condition. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded.
 - B. If mixed phase materials must be removed from process equipment, the cleared material shall be routed to a knockout drum or equivalent to allow for managed initial phase separation. If the VOC partial pressure is greater than 0.50 psi at either the normal process temperature or 95°F, any vents in the system must be routed to a control device or a controlled recovery system. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. Control must remain in place until degassing has been completed or the system is no longer vented to atmosphere.
 - C. All liquids from process equipment or storage vessels must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be drained into a closed vessel unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour of being drained.
 - D. If the VOC partial pressure is greater than 0.50 psi at the normal process temperature or 95°F, facilities shall be degassed using good engineering practice to ensure air contaminants are removed from the system through

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the control device or controlled recovery system to the extent allowed by process equipment or storage vessel design. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. The facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The venting shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery system utilized shall be recorded with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.

- (1) For MSS activities identified in Attachment B, the following option may be used in lieu of ii below. The facilities being prepared for maintenance shall not be vented directly to atmosphere until the VOC concentration has been verified to be less than 10 percent of the lower explosive limit (LEL) per the site safety procedures.
- (2) The locations and/or identifiers where the purge gas or steam enters the process equipment or storage vessel and the exit points for the exhaust gases shall be recorded (process flow diagrams [PFDs] or piping and instrumentation diagrams [P&IDs] may be used to demonstrate compliance with the requirement). If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system before the vent stream may be sampled to verify acceptable VOC concentration prior to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition 33. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged. If there is not a connection (such as a sample, vent, or drain valve) available from which a representative sample may be obtained, a sample may be taken upon entry into the system after degassing has been completed. The sample shall be taken from inside the vessel so as to minimize any air or dilution from the entry point. The facilities shall be degassed to a control device or controlled recovery

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system until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. Documented site procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures) that achieve at least the same level of purging may be used in lieu of the above.

- E. Gases and vapors with VOC partial pressure greater than 0.50 psi may be vented directly to atmosphere if all the following criteria are met:
- (1) It is not technically practicable to depressurize or degas, as applicable, into the process.
 - (2) There is not an available connection to a plant control system (flare).
 - (3) There is no more than 50 lb of air contaminant to be vented to atmosphere during shutdown or startup, as applicable.

All instances of venting directly to atmosphere per Special Condition 26 (E) must be documented when occurring as part of any MSS activity. The emissions associated with venting without control must be included in the work order or equivalent for those planned MSS activities identified in Attachment B.

27. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below. (09/11)
- A. VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR 60, Appendix A) with the following exceptions:
- (1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate (RF) shall be recorded. If the RF of the VOC (or mixture of VOCs) to be monitored is greater than 2.0, the VOC concentration shall be determined as follows:

VOC Concentration = Concentration as read from the instrument*RF

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(2) Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes, recording VOC concentration each minute. The highest measured VOC concentration shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.

(1) The air contaminant concentration measured is less than 80 percent of the range of the tube. If the maximum range of the tube is greater than the release concentration defined in (3), the concentration measured is at least 20 percent of the maximum range of the tube.

(2) The tube is used in accordance with the manufacturer's guidelines.

(3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

10,000*mole fraction of the total air contaminants present that can be detected by the tube.

The mole fraction may be estimated based on process knowledge. The release concentration and basis for its determination shall be recorded.

Records shall be maintained of the tube type, range, measured concentrations, and time the samples were taken.

C. Lower explosive limit measured with a lower explosive limit detector.

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- (1) The detector shall be calibrated monthly with a certified pentane gas standard at 25% of the lower explosive limit (LEL) for pentane. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.
 - (2) A daily functionality test shall be performed on each detector using a certified gas standard at 25% of the LEL for pentane. The LEL monitor shall read no lower than 90% of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.
 - (3) A certified methane gas standard equivalent to 25% of the LEL for pentane may be used for calibration and functionality tests provided that the LEL response is within 95% of that for pentane.
28. Tank roofs may only be landed for changes of tank service or tank inspection and maintenance as identified in the permit application. Emissions from change of service tank landings, for which the tank is not cleaned and degassed, shall not exceed 10 tons of VOC in any rolling 12 month period. Tank roof landings include all operations when the tank floating roof is on its supporting legs. These emissions are subject to the maximum allowable emission rates indicated on the MAERT. The following requirements apply to tank roof landings. **(09/11)**
- A. The tank liquid level shall be continuously lowered after the tank floating roof initially lands on its supporting legs until the tank has been drained to the maximum extent practicable without entering the tank. Liquid level may be maintained steady for a period of up to two hours if necessary to allow for valve lineups and pump changes necessary to drain the tank. This requirement does not apply where the vapor under a floating roof is routed to control or a controlled recovery system during this process.
 - B. If the VOC partial pressure of the liquid previously stored in the tank is greater than 0.50 psi at 95°F, tank refilling or degassing of the vapor space under the landed floating roof must begin within 24 hours after the tank has been drained unless the vapor under the floating roof is routed to control or a controlled recovery system during this period. The tank shall not be opened except as necessary to set up for degassing and cleaning. Floating roof tanks with liquid capacities less than 100,000 gallons may be degassed without control if the VOC partial pressure of the standing liquid in the tank has been reduced to less than 0.02 psia prior to ventilating the

tank. Controlled degassing of the vapor space under landed roofs shall be completed as follows:

- (1) Any gas or vapor removed from the vapor space under the floating roof must be routed to a control device or a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. The locations and identifiers of vents other than permanent roof fittings and seals, control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the vapor space under the floating roof when degassing to the control device or controlled recovery system.
 - (2) The vapor space under the floating roof shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the control device or controlled recovery system to the extent allowed by the storage tank design.
 - (3) A volume of purge gas equivalent to twice the volume of the vapor space under the floating roof must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition 27.
 - (4) The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged.
 - (5) Degassing must be performed every 24 hours unless there is no standing liquid in the tank or the VOC partial pressure of the remaining liquid in the tank is less than 0.15 psia.
- C. The tank shall not be opened or ventilated without control, except as allowed below until one of the criteria in part D of this condition is satisfied.

Minimize air circulation in the tank vapor space.

- (1) One manway may be opened to allow access to the tank to remove or de-volatilize the remaining liquid. Other manways or access points may be opened as necessary to remove or de-volatilize the remaining liquid. Wind barriers shall be installed at all open manways and access points to minimize air flow through the tank.
 - (2) Access points shall be closed when not in use
- D. The tank may be opened without restriction and ventilated without control, after all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure less than 0.02 psia. These criteria shall be demonstrated in any one of the following ways.
- (1) Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure of the liquid mixture remaining in the tank to less than 0.02 psia. This liquid shall be added during tank degassing if practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC partial pressure may be estimated based on this information and engineering calculations.
 - (2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:
 - a. Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR 435 Subpart A Appendix 1.
 - b. Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).
 - c. Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv through the procedure in Special Condition 27.

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- (3) No standing liquid verified through visual inspection.

The permit holder shall maintain records to document the method used to release the tank.

- E. Tanks shall be refilled as rapidly as practicable until the roof is off its legs with the following exception:

The vapor space below the tank roof is directed to a control device when the tank is refilled until the roof is floating on the liquid. The control device used and the method and locations used to connect the control device shall be recorded. All vents from the tank being filled must exit through the control device.

- F. The occurrence of each roof landing and the associated emissions shall be recorded and the rolling 12-month tank roof landing emissions shall be updated on a monthly basis. These records shall include at least the following information:

- (1) the identification of the tank and emission point number, and any control devices or recovery systems used to reduce emissions;
- (2) the reason for the tank roof landing;
- (3) for the purpose of estimating emissions, the date, time, and other information specified for each of the following events:
 - a. the roof was initially landed,
 - b. all liquid was pumped from the tank to the extent practical,
 - c. start and completion of controlled degassing, and total volumetric flow,
 - d. all standing liquid was removed from the tank or any transfers of low VOC partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to <0.02 psi,
 - e. if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow,
 - f. refilling commenced, liquid filling the tank, and the volume necessary to float the roof; and

- g. tank roof off supporting legs, floating on liquid;
 - (4) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events c and g with the data and methods used to determine it. The emissions associated with roof landing activities shall be calculated using the methods described in Section 7.1.3.2 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" dated November 2006 and the permit application.
29. Only one tank shall be degassed at a time. Tank degassing shall not take place at the same time as any other planned maintenance, startup, and shutdown activity. **(09/11)**
30. MSS activities represented in the permit application may be authorized under permit by rule only if the procedures, emission controls, monitoring, and recordkeeping are the same as those required by this permit. **(09/11)**
31. Control devices required by this permit for emissions from planned MSS activities are limited to those types identified in this condition. Control devices shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Each device used must meet all the requirements identified for that type of control device. **(09/11)**

Controlled recovery systems identified in this permit shall be directed to an operating process or to a collection system that is vented through a control device meeting the requirements of this permit condition.

A. Regenerative Thermal Oxidizer (EPN S-10)

The Regenerative Thermal Oxidizer shall meet the requirements of Special Condition 14 of this permit.

B. Biomethanator Flare (EPN S-60)

The Biomethanator Flare shall meet the requirements of Special Condition 12 of this permit.

C. Fermentation Scrubber (EPN S-40)

The Fermentation Scrubber shall meet the requirements of Special Condition 20 of this permit.

32. If spray guns are used to apply paint, they shall be airless, high volume low pressure (HVLP), or have the same or higher transfer efficiency as airless or HVLP spray guns. **(09/11)**
33. Emissions from all painting activities at this site must satisfy the criteria below. New compounds may also be added through the use of the procedure below. **(09/11)**
 - A. Short-term (pounds per hour [lb/hr]) and annual (TPY) emissions shall be determined for each chemical in the paint as documented in the permit application. The calculated emission rate shall not exceed the maximum allowable emissions rate at any emission point.
 - B. The Effect Screening Level (ESL) for the material shall be obtained from the current TCEQ ESL list or by written request to the TCEQ Toxicology Section.
 - C. The total painting emissions of any compound must satisfy one of the following conditions:
 - (1) The total emission rate is less than 0.1 lb/hr and the ESL greater than or equal to 2 $\mu\text{g}/\text{m}^3$; or
 - (2) The emission rate of the compound in pounds per hour is less than the ESL for the compound divided by 1000 ($\text{ER} < \text{ESL}/1000$)
 - D. The permit holder shall maintain records of the information below and the demonstrations in steps A through C above. The following documentation is required for each compound:
 - (1) Chemical name(s), composition, and chemical abstract registry number if available.
 - (2) Material Safety Data Sheet.
 - (3) Maximum concentration of the chemical in weight percent

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- (4) Paint usage and the associated emissions shall be recorded each month and the rolling 12 month total emissions updated.
34. No visible emissions shall leave the property due to painting. **(09/11)**
35. With the exception of the MAERT emission limits, these permit conditions become effective 180 days after this permit has been issued. During this period, monitoring and recordkeeping shall satisfy the requirements of Special Condition 25 (A) through 26 (D). Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded. The permit holder may maintain abbreviated records of emissions from Attachment A and B activities as allowed in Special Condition 25 rather than documenting all the information required by Special Condition 25 parts A through D. **(09/11)**

Dated July 10, 2013

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Attachment A
INHERENTLY LOW EMITTING ACTIVITIES

Activity	Emissions				
	VOC	NOx	CO	PM	H ₂ S/SO ₂
Minor Equipment Painting (spray cans and brushes)	x				

Dated September 26, 2011

Permit 75702
Attachment B
ROUTINE MAINTENANCE ACTIVITIES

Fermentation Tank Cleaning
Pump Maintenance and Leak Repair
Ethanol Storage Tank Cleaning

Dated September 26, 2011

Permit 75702
Attachment C
MSS ACTIVITY SUMMARY

Facilities	Description	Emissions Activity	EPN
See Attachment A	Low Emitting Activities	See Attachment A	MSS_EP
See Attachment B	Routine Maintenance Activities	venting to regenerative thermal oxidizer or atmosphere	S10, MSS_FERM, MSS_DIST, MSS_TANK, MSS_LOAD
fermentation equipment	maintenance: fermenters emptied to beer storage tank and rinsed with process water; fermenters then rinsed with 5% caustic solution and opened to atmosphere	venting to atmosphere	MSS_FERM
fermentation equipment	shutdown: fermenters shut down	venting to fermentation scrubber	S40
fermentation equipment	startup: fermenters started up	venting to fermentation scrubber	S40
distillation process equipment	maintenance: draining distillation column and opening column to atmosphere to perform maintenance	venting to atmosphere	MSS_DIST
distillation process equipment	shutdown: distillation columns shut down	venting to regenerative thermal oxidizer	S10
rotary dryers	startup: starting up natural gas fired rotary dryers	venting to regenerative thermal oxidizer	S10
rotary dryers	shutdown: shutting down natural gas fired rotary dryers	venting to regenerative thermal oxidizer	S10
anaerobic digester	solid scrubber bed replacement	venting digester gas to either the regenerative thermal oxidizer or the Biomethanator Flare	S10, S60
boilers	startup: running boilers at 25% of firing capacity for approximately 90 minutes	venting to atmosphere	S110A, S110B
boilers	shutdown: running boilers at 25% of firing capacity for approximately 15 minutes	venting to atmosphere	S110A, S110B
emergency fire water pump	maintenance run: starting up pump once a month and running it for approximately 15 minutes	venting to atmosphere	MSS_S100

Dated September 26, 2011

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The Fermentation Scrubber shall meet the requirements of Special Condition 20 of this permit.

32. If spray guns are used to apply paint, they shall be airless, high volume low pressure (HVLP), or have the same or higher transfer efficiency as airless or HVLP spray guns. **(09/11)**
33. Emissions from all painting activities at this site must satisfy the criteria below. New compounds may also be added through the use of the procedure below. **(09/11)**
 - A. Short-term (pounds per hour [lb/hr]) and annual (TPY) emissions shall be determined for each chemical in the paint as documented in the permit application. The calculated emission rate shall not exceed the maximum allowable emissions rate at any emission point.
 - B. The Effect Screening Level (ESL) for the material shall be obtained from the current TCEQ ESL list or by written request to the TCEQ Toxicology Section.
 - C. The total painting emissions of any compound must satisfy one of the following conditions:
 - (1) The total emission rate is less than 0.1 lb/hr and the ESL greater than or equal to 2 $\mu\text{g}/\text{m}^3$; or
 - (2) The emission rate of the compound in pounds per hour is less than the ESL for the compound divided by 1000 ($\text{ER} < \text{ESL}/1000$)
 - D. The permit holder shall maintain records of the information below and the demonstrations in steps A through C above. The following documentation is required for each compound:
 - (1) Chemical name(s), composition, and chemical abstract registry number if available.
 - (2) Material Safety Data Sheet.
 - (3) Maximum concentration of the chemical in weight percent

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- (4) Paint usage and the associated emissions shall be recorded each month and the rolling 12 month total emissions updated.
34. No visible emissions shall leave the property due to painting. (09/11)
35. With the exception of the MAERT emission limits, these permit conditions become effective 180 days after this permit has been issued. During this period, monitoring and recordkeeping shall satisfy the requirements of Special Condition 25 (A) through 26 (D). Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded. The permit holder may maintain abbreviated records of emissions from Attachment A and B activities as allowed in Special Condition 25 rather than documenting all the information required by Special Condition 25 parts A through D. (09/11)

Dated July 10, 2013