

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and those sources are limited to the emission limits and other conditions specified in that table.
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 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.

Federal Applicability

3. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60):
 - A. Subpart A, General Provisions.
 - B. Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.
 - C. Subpart NNN, Standards of Performance for VOC Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations.
 - D. Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
4. These facilities shall comply with all applicable requirements of the U.S. EPA regulations on National Emission Standards for Hazardous Air Pollutants in 40 CFR Part 61:
 - A. Subpart A, General Provisions.
 - B. Subpart FF, National Emission Standard for Benzene Waste Operations
5. These facilities shall comply with all applicable requirements of the U.S. EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63:
 - A. Subpart A, General Provisions.
 - B. Subpart FFFF, National Emission Standard for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing
 - C. Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
 - D. Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Source Categories (a.k.a. Maximum Achievable Control Technology (MACT))

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 2

Emissions Standards and Operating Specifications

- 6. Fuel gas combusted at this facility shall be either sweet natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf) or process fuel gas with a hydrogen sulfide (H₂S) concentration not to exceed 162 parts per million by volume, dry (ppmv) on a rolling 3-hour average, and 39 ppmv on rolling 12-month average. **(11/22)**
 - A. The holder of this permit shall install a continuous H₂S monitoring system in a portion of the fuel gas system common to the combustion devices covered by this permit in accordance with the fuel sulfur monitoring requirements of 40 CFR §60.105. **(11/22)**
- 7. The natural gas shall be sampled every 6 months to determine total sulfur and net heating value. Test results from the fuel supplier may be used to satisfy this requirement.
- 8. The following requirements apply to the emergency generator engines (EPNs E-01-EMGEN and E-02-EMGEN): **(10/21)**
 - A. Fuel shall be limited to ultra-low sulfur diesel (ULSD) containing no more than 15 ppmw total sulfur;
 - B. Each engine shall be limited to 52 hours per year during non-emergency situations, as defined at 40 CFR §63.6640(f);
 - C. The engine shall be equipped with a non-resettable hour meter;
 - D. The engine shall satisfy the Tier 2 (for EPN E-01-EMGEN) and Tier 3 (for EPN E-02-EMGEN) exhaust emission standards specified at 40 CFR §89.112.
 - E. Compliance with the emission limits of paragraph D of this Special Condition shall be demonstrated by retaining a copy of the manufacturer's certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.

Heaters

- 9. The permit holder shall install and operate a totalizing fuel flow meter to measure the gas fuel usage for each heater (EPNs E-55-201, E-55-202, and E-59-701) and fuel usage for each shall be recorded monthly. 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 5 percent.

Quality assured (or valid) data must be generated when the heaters (EPNs E-55-201, E-55-202, and E-59-701) are operating. 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 heaters (EPNs E-55-201, E-55-202, and E-59-701) operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. **(11/22)**

- 10. NO_x and CO emissions from the heaters (EPNs E-55-201, E-55-202, and E-59-701) shall not exceed the following: **(11/22)**
 - A. For Heater EPNs E-55-201 and E-55-202, the following limits are applicable:

Short-Term Average Limits		
Pollutant	Emission Limit	Averaging Period

NOx	0.035 lb/MMBtu	1-hr
CO	100 ppmvd*	1-hr
Short-Term MSS Limits		
NOx	0.15 lb/MMBtu	1-hr
CO	500 ppmvd*	1-hr
Long-Term Average Limits		
NOx	0.025 lb/MMBtu	Annual
CO	50 ppmvd*	Annual
* corrected to 3% O ₂		

B. For Heater EPN E-59-701, the following limits are applicable: **(11/22)**

Short-Term Average Limits		
Pollutant	Emission Limit	Averaging Period
NOx	0.015 lb/MMBtu	1-hr
CO	100 ppmvd*	1-hr
Short-Term MSS Limits		
NOx	0.15 lb/MMBtu	1-hr
CO	500 ppmvd*	1-hr
Long-Term Average Limits		
NOx	0.015 lb/MMBtu	Annual
CO	50 ppmvd*	Annual
* corrected to 3% O ₂		

11. The following requirements apply to Heater EPN E-59-701: **(11/22)**

- A. Compliance with the NOx and CO emission limits of Special Condition 10.B shall be demonstrated through the use of CEMS in accordance with Special Condition 12.
- B. The NH₃ concentration in the exhaust stack shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for NH₃ slip is only required on days when the SCR unit is in operation.
 - (1) Install, calibrate, maintain, and operate, as specified under Special Condition 12 a CEMS to measure and record the concentration of NH₃. The NH₃ concentration shall be corrected and reported in accordance with Special Condition 12.
 - (2) Use a sorbent or stain tube device specific for NH₃ measurement in the 5 to 10 parts per million (ppm) range. The frequency of sorbent/stain tube testing shall be performed 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 NH₃ from being introduced in the SCR units and when operation of the SCR units have been proven successful with regard to controlling NH₃ slip. Daily sorbent or stain tube testing shall resume when the catalyst is within 30 days of its useful life expectancy. These results shall be recorded and used to determine compliance with this Special Condition.

If sorbent or stain tube testing indicates an NH₃ slip concentration which exceed 5 ppm at any time, the permit holder shall begin NH₃ testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or the EPA Conditional Test Method (CTM) 27 on a quarterly basis, in addition to the weekly sorbent or stain tube testing. The quarterly testing shall continue until such time as the SCR unit catalyst is replaced; or if the quarterly testing indicates NH₃ slip is 4 ppm or less, the

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 4

Nitroprusside/Indophenol/CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 5 ppm NH₃ slip or greater. These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.

- (3) Install, calibrate, maintain, and operate, as specified under Special Condition 12, a second NO_x CEMS upstream of the control device (in addition to the NO_x CEMS required under this Special Condition). Perform the measurements and calculations associated with the mass balance method specified in 30 TAC § 117.8130(1), using NO_x CEMS data to determine the NO_x concentration differential across the control device.
- (4) Install and operate a dual stream system of NO_x CEMS at the exit of the SCR. 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 NH₃ converter to convert NH₃ to NO_x and then to a second NO_x CEMS. The NH₃ slip concentration shall be calculated according to the method specified in 30 TAC § 117.8130(2). These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.
- (5) Any other method used for measuring NH₃ slip shall require prior approval from the TCEQ Regional Director.

Continuous Emissions Monitoring System (CEMS)

12. 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, CO, O₂, and (in the case where one of the CEMS options is chosen as identified in Special Condition 11 above) NH₃ from the Heater (EPN E-59-701). **(11/22)**
 - 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; section 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, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.
 - (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, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 5

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 hourly 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 rates in pounds per hour at least once every week as follows:
- The measured (averaging period) average concentration from the CEMS shall be multiplied by the design flow rate identified in the permit amendment application, PI-1 dated April 28, 2022, 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 to provide them the opportunity to observe the testing.
- F. Quality-assured (or valid) data must be generated when the Heater (EPN E-59-701) 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 Heater (EPN E-59-701) 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 Manager.

Stack Sampling

13. 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 the heaters (EPNs E-55-201, E-55-202, and E-59-701) to demonstrate compliance with the MAERT and Special Condition No. 10. 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 Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual and the U.S. EPA Reference Methods.

Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, 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 Regional Director. **(11/22)**

- A. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:
- (1) Proposed date for pretest meeting.
 - (2) Date sampling will occur.
 - (3) Name of firm conducting sampling.
 - (4) Type of sampling equipment to be used.

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 6

- (5) Method or procedure to be used in sampling.
- (6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.
- (7) Procedure/parameters to be used to determine worst case emissions (such as production rate, temperature for incinerators, etc. These set operating parameters to be monitored and operating limits in other permit conditions) during 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 the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.

- B. Air contaminants emitted from the heaters (EPNs E-55-201, E-55-202, and E-59-701) to be tested for include (but are not limited to) CO and NOx.
- 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 regional office.
- D. The facility being sampled shall operate at maximum production rate during stack emission testing. 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 maximum production 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 Section Manager for the region.
- E. 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.
- F. Sampling ports and platform(s) shall be incorporated into the design of the heaters according to the specifications set forth in the attachment entitled "Chapter 2, Guidelines For Stack Sampling Facilities" of the TCEQ Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director.

Storage Tanks

14. Storage tanks are subject to the following requirements:

- A. Storage tank fill/withdrawal rate and service shall be limited to the following: **(TBD)**

Tank Identifier (EPN)	Tank Content	Fill/Withdrawal rate (bbl/hr)*	Tank Type
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T-304	Treated Fat/Oil Feed	5,000	VFR
	Treated Fat	5,000	VFR
T-301	Fats/Oil Feed	5,000	VFR
T-302	Fats/Oil Feed	5,000	VFR
T-303	Fats/Oil Feed	5,000	VFR
T-54-001	Fats/Oil Feed	2,500	VFR
T-56-012	50% Citric Acid	5,000	VFR
T-311	Treated Fat/Oil Feed	5,000	VFR
T-312	Treated Fat/Oil Feed	5,000	VFR
T-313	Treated Fat/Oil Feed	5,000	VFR
T-103	Renewable Diesel	2,500	VFR
T-2301	Renewable Diesel	5,000	VFR
T-2302	Renewable Diesel	5,000	VFR
T-2303	Renewable Jet	1,000	VFR
T-2304	Renewable Jet	5,000	VFR
T-2305	Renewable Jet	5,000	VFR
T-325	DGD Slop	5,000	EFR
T-321	Naphtha	1,500	EFR
T-322	Naphtha	15,000	EFR
GEN1-TK	Refinery ULSD	46	VFR
GEN2-TK	Refinery ULSD	29	VFR
*Values are representative of the withdrawal rate for tanks T-325, T-321, and T-322. For all other tanks, values are representative of the maximum fill rate.			

- B. The true vapor pressure of any liquid stored at this facility in an atmospheric tank shall not exceed 11.0 psia.
- C. Storage tanks are subject to the following requirements: The control requirements specified in parts A–H of this condition shall not apply (1) where the VOC has an aggregate partial pressure of less than 0.50 psia at the maximum feed temperature or 95°F, whichever is greater, or (2) to storage tanks smaller than 25,000 gallons.
- (1) The tank emissions must be controlled as specified in one of the paragraphs below:
- (a) An internal floating deck or “roof” shall be installed. A domed external floating roof tank is equivalent to an internal floating roof tank. 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 floating roof: (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 shall contain a floating roof (external floating roof tank) which uses double seal or secondary seal technology provided the primary seal

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 8

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 permit holder shall perform the visual inspections and any seal gap measurements specified in Title 40 Code of Federal Regulations § 60.113b (40 CFR § 60.113b) Testing and Procedures (as amended at 54 FR 32973, Aug. 11, 1989), or according to the alternative specified in 40 CFR § 60.110b(e) (as amended at 86 FR 5019, Jan. 19, 2021) to verify fitting and seal integrity. Records shall be maintained of the dates inspection was performed, any measurements made, results of inspections and measurements made (including raw data), and actions taken to correct any deficiencies noted. **(11/22)**
- E. The floating roof design shall incorporate sufficient flotation to conform to the requirements of 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.
- F. Each tank shall be designed as represented in the permit application, Form PI-1 dated July 28, 2023, to completely drain its entire contents to one or more sumps in a manner that limits the volume of free-standing liquid in the tank or the sump as follows: **(TBD)**

NPS (in.)	V _u (gal.)
2	9
3	14
4	32
6	75

Where: NPS is the nominal piping size of the sump pipe; and V_u is the maximum volume of free-standing liquid in the tank or sump.

- G. Tanks shall be constructed or equipped with a connection to a vapor recovery system that routes vapors from the vapor space under the landed roof to a control device.
- H. Except for labels, logos, etc. not to exceed 15 percent of the tank total surface area, uninsulated tank exterior surfaces exposed to the sun shall be white or unpainted aluminum. Storage tanks must be equipped with permanent submerged fill pipes.
- I. 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 from tanks shall be calculated using the methods that were used to determine the MAERT limits in the permit amendment application, PI-1 dated April 28, 2022. Sample calculations from the application shall be attached to a copy of this permit at the plant site. **(11/22)**

- J. Bullet tanks are limited to storing renewable propane/LPGs and shall be pressurized at all times the tanks are in use. The tank pressure shall not exceed that of any relief valve or rupture disk on the tank. **(02/21)**

- 15. The holder of this permit shall comply with the following limits to maintain the temperature (°F) and vapor pressure (psia) of the liquid in the tanks less than the values identified below at actual

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 9

storage conditions. The tank temperatures shall be continuously monitored, and the temperature shall be recorded daily and during tank filling. **(TBD)**

Tank Identifier (EPN)	Maximum Temperature (°F)	Vapor pressure (psia)
T-304 (treated fat/oil feed)	180	0.0018
T-304 (treated fat)	260	0.0024
T-301	180	0.0018
T-302	180	0.0018
T-303	180	0.0018
T-54-001	220	0.008
T-311	260	0.0024
T-312	260	0.0024
T-313	260	0.0024
T-103	124	0.05

Each temperature monitor shall be calibrated on an annual basis to meet an accuracy specification of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or $\pm 2.5^\circ\text{C}$. Up to 5 percent invalid monitoring data is acceptable on a rolling 12-month basis provided it is only generated when the monitor is broken down, out-of-control (producing inaccurate data); being repaired, having maintenance performed, or being calibrated. The data availability shall be calculated as the total tank operating hours for which quality assured data was recorded divided by the total tank hours in service. Invalid data generated due to other reasons is not allowed. The measurements missed shall be estimated using engineering judgement and the methods used recorded.

16. Only one of the blend tanks (EPNs T-301, T-302, T-303) and any one of the treated feed tanks (EPNs T-311, T-312, T-313) shall operate at the maximum fill rate in any one hour. **(10/21)**

Loading

17. The permit holder shall maintain and update a monthly emissions record which includes calculated emissions of VOC from all loading operations over the previous rolling 12-month period. The record shall include the number of loading hose disconnects and name of the liquid loaded. Emissions shall be calculated using the methods that were used to determine the MAERT limits in the permit amendment application, PI-1 dated September 1, 2021. **(10/21)**
18. 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. Operations shall cease immediately upon detection of any liquid leaking from the lines or connections.
19. The following requirements apply to transfer of Liquefied Petroleum Gas (LPG)/propane/butanes to pressurized trucks and railcars:

Transfer racks shall be designed such that the total volume of components to be disconnected and vented to the atmosphere following transfer to any transport truck or railcar, including adapters, hoses, fittings, valves or couplings, does not exceed 1.47 cubic feet.

Cooling Tower

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 10

20. The VOC associated with cooling tower (EPN E-CT-350) water shall be monitored monthly with an air stripping system meeting the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or an approved equivalent sampling method. The results of the monitoring, cooling water flow rate and maintenance activities on the cooling water system shall be recorded. The monitoring results and cooling water hourly mass flow rate shall be used to determine cooling tower hourly VOC emissions. The rolling 12-month cooling water emission rate shall be recorded on a monthly basis and be determined by summing the VOC emissions between VOC monitoring periods over the rolling 12-month period. The emissions between VOC monitoring periods shall be obtained by multiplying the total cooling water mass flow between cooling water monitoring periods by the higher of the 2 VOC monitored results.
21. The cooling tower (EPN E-CT-350) shall be operated and monitored in accordance with the following:
- A. Each cooling tower shall be equipped with drift eliminators having manufacturer's design assurance of 0.001% drift or less. Drifts eliminators shall be maintained and inspected at least annually. The permit holder shall maintain records of all inspections and repairs.
 - B. Total dissolved solids (TDS) shall not exceed 2,500 parts per million by weight (ppmw). Dissolved solids in the cooling water drift are considered to be emitted as PM, PM₁₀, and PM_{2.5} as represented in the permit application calculations.
 - C. Cooling water shall be sampled at least once per week for TDS.
 - D. Cooling water sampling shall be representative of the cooling tower feed water and shall be conducted using approved methods.
 - (1) The analysis method for TDS shall be EPA Method 160.1, ASTM D5907, or SM 2540 C [SM - 19th edition of Standard Methods for Examination of Water]. Water samples should be capped upon collection and transferred to a laboratory area for analysis.
 - (2) Alternate sampling and analysis methods may be used to comply with D(1) with written approval from the TCEQ Regional Director.
 - (3) Records of all instrument calibrations and test results and process measurements used for the emission calculations shall be retained.
 - E. Emission rates of PM, PM₁₀ and PM_{2.5} shall be calculated using the measured TDS, the design drift rate and the daily maximum and average actual cooling water circulation rate for the short term and annual average rates. Alternately, the design maximum circulation rate may be used for all calculations. Emission records shall be updated monthly.

Flare and Vapor Combustor

22. The Flare (EPN E-30-FLARE) 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 at all times when emissions may be vented to them.

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 regional office to demonstrate compliance with these requirements.

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 11

- 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, infrared monitor, or ultraviolet 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. This shall be ensured by the use of steam assist to the flare.
- D. The permit holder shall install a continuous flow monitor and calorimeter that provide a record of the vent stream flow and Btu content to the flare. The flow monitor sensor and analyzer sample points shall be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow and composition (or Btu content) shall be recorded each hour.

The monitors shall be calibrated or have a calibration check performed on an annual basis to meet the following accuracy specifications: the flow monitor shall be $\pm 5.0\%$, temperature monitor shall be $\pm 2.0\%$ at absolute temperature, and pressure monitor shall be ± 5.0 mm Hg.

Calibration of the analyzer shall follow the procedures and requirements of Section 10.0 of 40 CFR Part 60, Appendix B, Performance Specification 9, as amended through October 17, 2000 (65 FR 61744), except that the multi-point calibration procedure in Section 10.1 of Performance Specification 9 shall be performed at least once every calendar quarter instead of once every month, and the mid-level calibration check procedure in Section 10.2 of Performance Specification 9 shall be performed at least once every calendar week instead of once every 24 hours. The calibration gases used for calibration procedures shall be in accordance with Section 7.1 of Performance Specification 9. Net heating value of the gas combusted in the flare shall be calculated according to the equation given in 40 CFR §60.18(f)(3) as amended through October 17, 2000 (65 FR 61744).

The calorimeter shall be calibrated, installed, operated, and maintained, in accordance with manufacturer recommendations, to continuously measure and record the net heating value of the gas sent to the flare, in British thermal units/standard cubic foot of the gas.

The monitors and analyzers shall operate as required by this section at least 95% of the time when the flare is operational, averaged over a rolling 12-month period. Flared gas net heating value and actual exit velocity determined in accordance with 40 CFR §§60.18(f)(3) and 60.18(f)(4) shall be recorded at least once every hour.

Fugitives

Piping, Valves, Connectors, Pumps, Agitators, and Compressors – 28VHP

- 23. The following requirements apply to piping, valves, connectors, pumps, agitators, and compressors containing or in contact with fluids that could reasonably be expected to contain greater than or equal to 10 weight percent VOC at any time.
 - A. The requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (psia) at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 12

- piping and instrumentation diagram (PID);
 - a written or electronic database or electronic file;
 - color coding;
 - a form of weatherproof identification; or
 - designation of exempted process unit boundaries.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.
- 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. Difficult-to-monitor and unsafe-to-monitor valves, as defined by 30 TAC Chapter 115, shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in Paragraph A above. If an unsafe to monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be 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 an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open-ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;
- (1) a cap, blind flange, plug, or second valve must be installed on the line or valve; or
 - (2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once within the 72-hour period following the creation of the open-ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.
- 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,

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 13

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. If a relief valve is equipped with rupture disc, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured. 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, compressor, and agitator 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 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 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 parts per million by volume (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, compressor, and agitator 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. A first attempt to repair the leak must be made within 5 days and a record of the attempt shall be maintained.
- I. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, 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 within 15 days of the detection of the leak. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 14

repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shut down as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(l) or 500 pounds, whichever is greater, the TCEQ Regional Manager and any local programs shall be notified and the TCEQ Executive Director may require early unit shut down or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

- J. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.
- 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 and 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 (NESHAPS) and does not constitute approval of alternative standards for these regulations.

Physical Inspections of Piping, Valves, Pumps, and Compressors – 28PI

- 24. Except as may be provided for in the special conditions of this permit, the following requirements apply to the components in ultra-heavy liquid service:
 - A. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable ANSI, API, ASME, or equivalent codes.
 - B. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
 - C. 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.
 - D. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter.
 - E. 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. All piping components shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.
 - G. Damaged or leaking valves, connectors, compressor seals, and pump seals found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A leaking component shall be repaired as soon as practicable, but no later than 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

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 15

shutdown or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.

- H. Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the TCEQ upon request.

Piping, Valves, Pumps, and Compressors in contact with NH₃ - 28AVO

25. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment: **(11/22)**

- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made twice per 12-hour shift.
- B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take at least one of the following actions:
 - (1) Isolate the leak.
 - (2) Commence repair or replacement of the leaking component.
 - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the TCEQ upon request.

Compliance Assurance Monitoring

26. The following requirements apply to capture systems for the Flare (EPN E-30-FLARE)

- A. If used to control pollutants other than particulate, either:
 - (1) Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or
 - (2) Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.
- B. The control device shall not have a bypass; or
If there is a bypass for the control device, comply with either of the following requirements:
 - (1) Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
 - (2) Once a month, inspect the valves, verifying that the position of the valves and the condition of the car seals prevent flow out the bypass.

A bypass does not include authorized analyzer vents, highpoint bleeder vents, low point drains, or rupture discs upstream of pressure relief valves if the pressure between the disc and relief valve is monitored and recorded at least weekly. A deviation shall be reported if

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 16

the monitoring or inspections indicate bypass of the control device when it is required to be in service.

- C. Records of the inspections required shall be maintained and if the results of any of the above inspections are not satisfactory, the permit holder shall promptly take necessary corrective action.

Material Handling

- 27. Opacity of particulate matter emissions from each baghouse (dust collector) stack associated with Pre-Treatment Solid Material Handling (EPN C-DGDPM), Bleached Earth/Filter Aid Unloading (EPN C-DGDUNLD), Bleached Earth Storage Silos (EPN E-BE-DGD), and Filter Aid Storage Silos (EPN E-FA-DGD) shall not exceed 5 percent, averaged over a six-minute period.
- 28. Visible fugitive emissions from material receiving, handling, and loadout shall not leave the property for more than 30 cumulative seconds in any six-minute period.
- 29. Emission rates are based on and the facilities shall be limited as follows:

Source	EPN	Maximum Throughput (lb/hr)	Annual Throughput (tpy)
Bleached Earth/Filter Aid Unloading (Railcar to Hopper)	C-DGDUNLD	16,667	65,585
Bleached Earth/Filter Aid Unloading (Hopper to Truck)		16,667	5,550
Bleached Earth Storage Silos	E-BE-DGD	7,500	65,585
Filter Aid Storage silos	E-FA-DGD	7,500	5,550

- 30. Fabric filter baghouses designed to meet an outlet grain loading of not more than 0.01 grains per dry standard cubic foot of exhaust each, properly installed and in good working order, shall control particulate matter emissions from Bleached Earth/Filter Aid Unloading (EPN C-DGDUNLD), Bleached Earth Storage Silos (EPN E-BE-DGD), and Filter Aid Storage Silos (EPN E-FA-DGD) when this equipment is in operation.
- 31. Sock filters, properly installed and in good working order, rated at a particulate matter control efficiency of 93% shall control particulate matter from the Pre-Treatment Solid Material Handling (EPN C DGDPM) transfer points for materials with a moisture content less than 10%.
- 32. All hooding, duct, and collection systems shall be effective in capturing emissions from the intended equipment and in preventing fugitive emissions. The hooding and duct systems shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emission capture system.
- 33. The holder of this permit shall conduct a quarterly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each baghouse (dust collector) stack associated with Bleached Earth/Filter Aid Unloading (EPN C-DGDUNLD), Bleached Earth Storage Silos (EPN E-BE-DGD), and the Filter Aid Storage Silos (EPN E-FA-DGD). This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the emission point. If visible emissions are observed from the emission point, the owner or operator shall:

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 17

- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or
 - B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.
34. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the baghouse (dust collector). Each monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of ± 0.5 -inch water gauge pressure (± 125 pascals) or a span of ± 3 percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
 35. The filter media differential pressure shall be maintained between 2- and 6-inches water column, or as defined by the manufacturer.
 36. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in Special Condition 35 or the manufacturer's recommendation.
 37. If the filter system operating performance parameters are outside of the 2- and 6-inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired.
 38. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
 - A. Daily, monthly, and annual amounts of materials handled, summarized in tons per hour, tons per month, and tons per year.
 - B. Quarterly observations for visible emissions and/or opacity determinations each baghouse (dust collector) stack associated with Bleached Earth/Filter Aid Unloading (EPN C-DGDUNLD), Bleached Earth Storage Silos (EPN E-BE-DGD), and the Filter Aid Storage Silos (EPN E-FA-DGD).
 - C. All malfunctions, repairs, and maintenance of abatement systems, which includes bag replacement and the manufacturer's suggested cleaning and maintenance schedule.

Wastewater Pretreatment

39. Process wastewater drains shall be equipped with water seals or equivalent, lift stations, manholes, junction boxes, any other wastewater collection system components, and conveyance.

Water seals shall be checked by visual or physical inspection quarterly for indications of low water levels or other conditions that would reduce the effectiveness of water seal controls. Water seals shall be restored as necessary within 24 hours. Records shall be maintained of these inspections and corrective actions taken.

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 18

40. The daily wastewater flow into the wastewater pretreatment plant shall be monitored and recorded. The rolling 12-month wastewater flow shall be totaled on a monthly basis.

41. The minimum mixed liquor suspended solids (MLSS) concentration in the aeration basins on a daily average basis shall not be less than 1,000 mg/L. The daily average MLSS concentration is defined as the arithmetic average of all samples collected during the 24-hour period. MLSS concentrations shall be monitored and recorded by collecting a minimum of one grab sample per day from each aeration basin. The permittee may, at its discretion, install an automated composite sampler to collect samples of aeration basin mixed liquor for MLSS testing. All MLSS analyses shall be performed using Method 2540D (Standard Methods of the Examination of Water and Wastewater, 23rd Edition, American Public Health Association). More recent versions of Method 2540D may be used when and if this procedure is updated.

Alternate monitoring or sampling requirements that are equivalent or better may be approved by the TCEQ Regional Office. Alternate requirements must be approved in writing before they can be used for compliance purposes.

Maintenance, Startup, and Shutdown

42. This permit authorizes emissions from the following temporary facilities used to support planned MSS activities at permanent site facilities: frac tanks, containers, vacuum trucks, portable control devices identified in Special Condition No. 49 and controlled recovery systems. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned MSS activities at the permanent site facilities listed in this permit, and (c) does not operate as a replacement for an existing authorized facility.

Attachment A identifies the inherently low emitting MSS activities that may be performed at the site. 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 or the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;
- D. the date on which the MSS activity occurred;
- E. the estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 19

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

43. Process units and facilities, with the exception of those identified in Special Condition Nos. 45, 46, and 48, and activities listed in Attachment A, shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements.
- 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 or closed liquid recovery system 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 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 (2) 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

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 20

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 44. 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 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. Equipment with VOC TVP 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 43. 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, shift logs, or equivalent for those planned MSS activities identified in Attachment B.

44. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below.

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

In no case should a calibration gas be used such that the RF of the VOC (or mixture of VOCs) to be monitored is greater than 5.0.

- (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. As an alternative the VOC concentration may be monitored over a five-minute period with an instrument designed to continuously measure concentration and record the highest concentration read. The highest measured VOC concentration shall be recorded and shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 21

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 as defined in (3) is less than 80 percent of the range of the tube and 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.

- (1) The detector shall be calibrated within 30 days of use with a certified pentane 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 functionality test shall be performed on each detector within 24 hours of use with 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.

45. This permit authorizes emissions from EPNs C-CMSSDGD and C-UMSSDGD for the storage tanks identified in Special Condition No. 14 during planned floating roof landings. Tank roofs may only be landed for changes of tank service or tank inspection/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.

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

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 22

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 44.
 - (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 by below until one of the criteria in part D of this condition is satisfied.
- (1) Minimize air circulation in the tank vapor space.
 - (a) 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.
 - (b) 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.

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 23

- (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 44.
- (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 exceptions:

- (1) Only one tank with a landed floating roof can be filled at any time at a rate not to exceed 2,000 bbl/hr.
- (2) 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

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 24

described in Sections 7.1.3.3 and 7.1.3.4 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" dated June 2020 (or later edition) and the permit application. **(11/22)**

46. Fixed roof storage tanks are subject to the requirements of Special Condition 45.C. and 45.D. If the ventilation of the vapor space is controlled, the emission control system shall meet the requirements of Special Condition 45.B.(1) through 45.B.(4). Records shall be maintained per Special Condition 45.F.(3)c through 45.F.(3)e, and 45.F.(4).
47. The following requirements apply to vacuum and air mover truck operations to support planned MSS at this site:
- A. Prior to initial use, identify any liquid in the truck. Record the liquid level and document the VOC partial pressure. After each liquid transfer, identify the liquid, the volume transferred, and its VOC partial pressure.
 - B. If vacuum pumps or blowers are operated when liquid is in or being transferred to the truck, the following requirements apply:
 - (1) If the VOC partial pressure of the liquid in or being transferred to the truck is greater than 0.50 psi at 95°F, the vacuum/blower exhaust shall be routed to a control device or a controlled recovery system.
 - (2) Equip fill line intake with a "duckbill" or equivalent attachment if the hose end cannot be submerged in the liquid being collected.
 - (3) A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.
 - (a) For each liquid transfer made with the vacuum operating, record the duration of any periods when air may have been entrained with the liquid transfer. The reason for operating in this manner and whether a "duckbill" or equivalent was used shall be recorded. Short, incidental periods, such as those necessary to walk from the truck to the fill line intake, do not need to be documented.
 - (b) If the vacuum truck exhaust is controlled with a control device other than an engine or oxidizer, VOC exhaust concentration upon commencing each transfer, at the end of each transfer, and at least every hour during each transfer shall be recorded, measured using an instrument meeting the requirements of Special Condition 44.A or B.
 - C. Record the volume in the vacuum truck at the end of the day, or the volume unloaded, as applicable.
 - D. The permit holder shall determine the vacuum truck emissions each month using the daily vacuum truck records and the calculation methods utilized in the permit application. If records of the volume of liquid transferred for each pick-up are not maintained, the emissions shall be determined using the physical properties of the liquid vacuumed with the greatest potential emissions. Rolling 12-month vacuum truck emissions shall also be determined on a monthly basis.
 - E. If the VOC partial pressure of all the liquids vacuumed into the truck is less than 0.10 psi, this shall be recorded when the truck is unloaded or leaves the plant site and the emissions may be estimated as the maximum potential to emit for a truck in that service as documented in the permit application. The recordkeeping requirements in Special Condition 47.A through 47.D do not apply.

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 25

48. The following requirements apply to frac, or temporary, tanks and vessels used in support of MSS activities.
- A. The exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum effective May 1, 2013. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled, sampled, gauged, or when removing material.
 - B. These tanks/vessels must be covered and equipped with fill pipes that discharge within 6 inches of the tank/vessel bottom.
 - C. These requirements do not apply to vessels storing less than 450 gallons of liquid that are closed such that the vessel does not vent to atmosphere except when filling, sampling, gauging, or when removing material.
 - D. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all frac tanks during the previous calendar month and the past consecutive 12-month period. This record must be updated by the last day of the month following. The record shall include tank identification number, dates put into and removed from service, control method used, tank capacity and volume of liquid stored in gallons, name of the material stored, VOC molecular weight, and VOC partial pressure at the estimated monthly average material temperature in psia. Filling emissions for tanks shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations" and standing emissions determined using: the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks."
 - E. If the tank/vessel is used to store liquid with VOC partial pressure less than 0.10 psi at 95°F, records may be limited to the days the tank is in service and the liquid stored. Emissions may be estimated based upon the potential to emit as identified in the permit application.
49. 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.

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. Portable Vapor Combustion Unit (VCU)
 - (1) The portable vapor combustor unit (EPN C-CMSSDGD) shall achieve a minimum of 99% control of the waste gas directed to it. This shall be ensured by maintaining the temperature in, or immediately downstream of, the combustion chamber above 1400°F.
 - (2) The temperature measurement device shall reduce the temperature readings to an averaging period of 6 minutes or less and record it at that frequency. The temperature monitor shall be installed, calibrated or have a calibration check performed at least annually, and maintained according to the manufacturer's specifications. The device shall have an accuracy of the greater of ± 2 percent of the temperature being measured expressed in degrees Celsius or $\pm 2.5^\circ\text{C}$.
- B. Floating roof tank MSS activities shall be routed to the temporary VCU (EPN: C-CMSSDGD).
- C. Fuel for EPN C-CMSSDGD shall be propane or natural gas.

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 26

D. In order to demonstrate compliance with the maximum allowable emission rates, the permit holder shall record the following during periods of VCU operation:

- (1) Date and start time of tank roof landings prior to degassing.
- (2) Date, start time, and end time of refilling the floating roof tanks after MSS landings, condition prior to refilling (clean/dirty) to determine saturation factor, tank refilling rate, material being placed in the tank, and material vapor pressure.
- (3) Date, start time, and end time of controlled degassing, the tanks involved, material in the tank prior to degassing, and vapor pressure of that material.

50. The following additional operational limitations apply: **(10/21)**

- A. Controlled MSS activities (EPN C-CMSSDGD) shall occur for no more than 96 hours per year;
- B. The limits identified below apply to the operations of the specified facilities during startup and shutdown. **(11/22)**

EPN	Source Name	Pollutant or Criteria	Limit	Duration
E-55-201	Feed Treating Heater	NO _x	0.15 lb/MMBtu	76 Hours ¹
		CO	500 ppmv*	
E-55-202	Isomerization Heater	NO _x	0.15 lb/MMBtu	76 Hours ¹
		CO	500 ppmv*	
E-59-701	SAF Heater	NO _x	0.15 lb/MMBtu	76 Hours ¹
		CO	500 ppmv*	
¹ Duration represents the total number of hours on a 12-month basis. * corrected to 3% O ₂ .				

51. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

Greenhouse Gases Special Conditions

52. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC § 116.164. If construction, a physical change or a change in method of operation results in Prevention of Significant Deterioration (PSD) review for criteria pollutants, records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction, a physical change or a change in method of operation does not require authorization under 30 TAC §116.164(a). If there is construction, a physical change or change in the method of operation that will result in a net emission increase of 75,000 tpy or more CO_{2e} and PSD review is triggered for criteria pollutants, greenhouse gas emissions are subject to PSD review.

53. Monitoring, quality assurance/quality control requirements, emission calculation methodologies, record keeping, and reporting requirements related to Greenhouse Gas (GHG) emissions shall adhere to the applicable requirements in 40 CFR Part 98 and in this permit.

54. Permittee shall calculate, upon startup of the GHG emitting combustion devices, the CO_{2e} emissions on a 12-month rolling basis, based on the procedures and Global Warming Potentials

Special Conditions

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Page 27

(GWP) contained in Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1, for sources and emissions included as listed source categories in 40 CFR 98.2. Process generated CO₂ shall be estimated using the methods in amendment application, PI-1 dated April 18, 2017.

55. Records of emissions of GHG, and how they were determined, in compliance with Special Condition Nos. 52, 53, and 54 must be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and must be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction.

Date: TBD

DRAFT

Attachment A

Inherently Low Emitting Activities

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Activity	Emissions				
	VOC	NO _x	CO	PM	H ₂ S/SO ₂
Inspection, repair, and replacement of analyzer filters/screens	X				
Inspection, repair, and replacement of process filters/screens	X				
Inspection, repair, replacement, adjustment, testing, and calibration of CEMS analyzers					X
Inspection, repair, replacement, adjustment, testing, and calibration of process instrumentation	X				
Carbon canister inspection, repair, and replacement (valve disconnect)	X				
Catalyst replacement	X				
Tank seal inspections and other tank inspection activities	X				
Water washing empty drums, totes, and misc. small equipment	X				
Cold Solvent Degreaser	X				
Meter proving to control device	X	X	X	X	
Combinations of the above	X	X	X		X

Date: September 16, 2020

Attachment B

Routine Maintenance Activities

Permit Numbers 160299, PSDTX1576M1, and GHGPSDTX200M1

Planned MSS activities: These include activities such as:

Pump, compressor, vessel, exchanger, combustion source, heater inspection, repair, or replacement

Valve and piping maintenance/replacement not included in Attachment A

Pipeline pigging

Compressor maintenance

Maintenance on light liquid pumps which are purged to slop, flare, or controlled process sewer system

Maintenance on heavy liquid pumps which are purged to slop, flare, or controlled process sewer system

Maintenance on heavy liquid pumps which are purged to open containers

Date: September 16, 2020