

Special Conditions

Permit Numbers 46307, PSDTX1580, N288, and GHGPSDTX202

Emission Limitations

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 requirements specified in the special conditions.
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 (NSPS) promulgated in Title 40 Code of Federal Regulations (40 CFR) Part 60:
 - A. Subpart A – General Provisions;
 - B. Subpart Kb – Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
 - C. Subpart VV – Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.
 - D. Subpart VVa – Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction or Modification Commenced After November 7, 2006.
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. Subparts A - General Provisions;
 - B. Subpart FF - 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 F - Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry;
 - C. Subpart G – Organic Hazardous Air Pollutants from Synthetic Organic Chemical Manufacturing Industry Process Vents, Storage Vessels, Transfer Operations, and Wastewater;

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- D. Subpart H – Organic Hazardous Air Pollutants for Equipment Leaks;
- E. Subpart FFFF - Miscellaneous Organic Chemical Manufacturing; and
- F. Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines.

Operational Limitations

- 6. Safety relief valves that discharge to the atmosphere only as a result of fire or failure of utilities are exempt from quarterly monitoring per 30 TAC Chapter 115 and 40 CFR Part 60 Subpart VV, provided that each valve is equipped with a rupture disc upstream. A pressure gauge 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.
- 7. Total production throughput of polyisobutylene (PIB) shall be limited to 340 MMlbs/yr. Annual throughput records shall be maintained at the plant site. **(09/24)**

Upon request by the Texas Commission on Environmental Quality (TCEQ) Executive Director, 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.

Emission Standards and Fuel Specifications

- 8. Fuel for the Diesel Water Blaster Engine (Emission Point No. [EPN] 31G-2350) is limited to commercially available ultra-low sulfur diesel fuel purchased after June 1, 2006.
- 9. Particulate matter (PM) vent emissions from any spent catalyst transfer operations shall be controlled using filter systems and will not exceed 0.01 grain per dscf of air.
- 10. All PM filter systems must effectively capture emissions from associated equipment and prevent particulate emissions from escaping. The PM filter system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emission capture system.

Storage of Volatile Organic Compounds (VOC)

- 11. The service of Tanks T-103 and T-114 shall be limited to MTBE/ETBE. The service of Tank T-115 shall be limited to MTBE/ETBE/IC8. Storage of other chemicals is prohibited unless prior approval for such storage is obtained from the Executive Director of the TCEQ. The tanks shall be limited to the specified annual MTBE /ETBE throughput, on a rolling 12-month basis. Records shall be kept of the rolling 12-month MTBE/ETBE throughput for Tanks T-103, T-114, and T-115. These records shall be made available upon request to the TCEQ and to local governmental air pollution control agencies. **(6/22)**

Tank	Rolling 12-month Throughput (barrels per year)
Storage Tank 103	7,300,320
Storage Tank 114	3,099,600
Storage Tank 115	3,099,600

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12. The service and fill rates for Tanks T-117, T-118, T-119, T-204, T-205, and T-206 are limited as indicated in the table below. **(06/18)**

Tank	Service	Fill Rate (gallons/hour)
T-117	PIB	2,286
T-118	PIB	2,286
T-119	PIB	2,286
T-204	PIB	2,494
T-205	PIB	2,494
T-206	PIB	2,494

13. Storage tanks are subject to the following requirements. The control requirements specified in Paragraphs A – D 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.
- A. An internal floating deck or “roof” or equivalent control shall be installed in all tanks. The floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof: (1) a liquid-mounted seal, (2) two continuous seals mounted one above the other, or (3) a mechanical shoe seal.
 - B. An open-top tank containing a floating roof (external floating roof tank) which uses double seal or secondary seal technology shall be an approved control alternative to an internal floating roof 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 weather shield is not approvable as a secondary seal unless specifically reviewed and determined to be vapor-tight.
 - C. For any tank equipped with a floating roof, the permit holder shall perform the visual inspections and seal gap measurements as specified in 40 CFR § 60.113b Testing and Procedures (as amended at 54 FR 32973, Aug. 11, 1989) to verify fitting and seal integrity. Records shall be maintained of the dates seals were inspected and seal gap measurements made, results of inspections and measurements made (including raw data), and actions taken to correct any deficiencies noted.
 - D. The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650 dated November 1, 1998, except that an internal floating cover need not be designed to meet rainfall support requirements and the materials of construction may be steel or other materials.
 - E. Uninsulated tank exterior surfaces exposed to the sun shall be white or aluminum. Storage tanks must be equipped with permanent submerged fill pipes.
 - F. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all storage tanks during the previous calendar month and the past consecutive 12-month period. The record shall include tank identification number, control method used, tank capacity in gallons, name of the material stored, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures. Emissions for tanks shall be

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calculated using: the TCEQ publication titled "Technical Guidance Package for Chemical Sources – Storage Tanks."

14. For any tank associated with this permit that is equipped with a floating roof, the holder of this permit shall (1) conduct annual visual inspections to verify the integrity of the external floating roof seals; (2) conduct annual visual inspections to verify the integrity of the visible portion of the internal floating roof seal or seals; (3) maintain records which describe inspections dates, seal integrity, and corrective actions taken; and (4) make necessary repairs as soon as practicable, if corrective action is necessary.

The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650, Appendix C, or an equivalent degree of flotation, except that an internal floating cover need not be designed to meet rainfall support requirements.

Product Loading

15. The total hourly loading transfer rate of PIB at all loading stations combined (EPN LOADGRP) shall not exceed 49,500 gallons per hour. **(01/18)**
16. The permit holder shall maintain and update 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 loading spot, control method used, quantity loaded in gallons, name of the liquid loaded, vapor molecular weight, liquid temperature in degrees Fahrenheit, liquid vapor pressure at the liquid temperature in psia, liquid throughput for the previous month and rolling 12 months to date. Records of VOC temperature are not required to be kept for liquids loaded from unheated tanks which receive liquids that are at or below ambient temperatures. Emissions shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources Loading Operations."
17. All product loading lines and connectors shall be visually inspected for any defects prior to hookup. Product loading 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.
18. All loading shall be submerged. Any liquid spill that occurs during loading/unloading activities shall be reported pursuant to 30 TAC §§ 101.201 or 101.211 and shall be cleaned up immediately to minimize air emissions. **(01/18)**
19. "Dry break" loading equipment will be used during loading and unloading of butadiene from railcars.
20. No more than three tank trucks shall be loaded with PIB at any time. No more than four railcars shall be loaded with PIB at any time. PIB tank truck and railcar loading may occur simultaneously. **(01/18)**
21. PIB-HOF loading operations are subject to the following requirements. **(01/18)**
 - A. All loading shall be controlled by the plant vapor recovery system.
 - B. All tank trucks shall pass vapor-tight testing every 12 months using the methods described in 40 CFR Part 60, Subpart XX. The permit holder shall not allow a tank truck to be filled unless it has passed a leak-tight test within the past year as evidenced by a certificate which shows the date the tank truck last passed the leak-tight test required by this condition and the identification number of the tank truck.

Cooling Tower Requirements

22. Cooling Towers EPNs CT-14, CT-17, and CT-18 shall be analyzed for particulate emissions. Cooling water shall be sampled at least once per day for total dissolved solids (TDS). TDS monitoring may be reduced to weekly if conductivity is monitored daily and TDS is calculated using a ratio of TDS-to-conductivity. The ratio of TDS-to-conductivity shall be determined by concurrently monitoring TDS and conductivity on a weekly basis. Particulate emission rates shall be calculated using the measured TDS and the ratio or correlation of TDS to conductivity measurements, the design drift factor and the cooling water circulation rate. Alternately, the design maximum cooling water circulation rate may be used for all calculations. Emission records shall be updated.

This Special Condition becomes effective for CT-14, CT-17, and CT-18 on October 16, 2018 (nine months after the date of the permit amendment issuance). **(01/18)**

23. Cooling towers shall be monitored for VOC emissions in accordance with the following requirements: **(6/22)**
- A. The highly reactive VOC (HRVOC) associated with cooling tower water shall be monitored and tested as specified by 30 TAC § 115.764 (effective November 13, 2003) and 30 TAC § 115.766 (effective January 17, 2003). The total strippable VOC associated with cooling tower water shall be monitored by methods at least as stringent as monthly testing using the method represented in the TCEQ Sampling Procedures Manual, Appendix P. Continuous monitoring of total strippable VOCs according to the methods specified in § 115.766, if performed, shall also satisfy the monitoring requirements of this permit. Records shall be kept in compliance with 30 TAC § 115.767 effective November 13, 2003. The results of the monitoring and maintenance efforts shall be recorded, and such records shall be maintained for a period of five years. The records shall be made available to the TCEQ Executive Director upon request.
 - B. The VOC associated with cooling tower water shall be monitored weekly 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.
 - C. The cooling towers to be monitored include EPNs: CT-7, CT-11, CT-14, CT-17 and CT-18. **(01/18)**
 - D. The appropriate equipment shall be maintained so as to minimize fugitive VOC emissions from the cooling towers. Upon a reading of VOC concentration greater than 0.042 ppmw in the cooling tower heater exchange system, the permit holder shall identify the source of VOC and repair the equipment at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs.
 - E. Emissions from the cooling tower are not authorized if the VOC concentration of the water returning to the cooling tower exceeds 0.8 ppmw. The VOC concentrations above 0.8 ppmw are not subject to extensions for delay of repair under this permit condition. The results of the monitoring and maintenance efforts shall be recorded.
24. The cooling tower (EPN F-CT-10) shall be operated and monitored in accordance with the following: **(6/22)**
- A. The cooling tower water shall be monitored monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.

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- B. Cooling tower water VOC concentrations above 0.042 ppmw indicate faulty equipment. Equipment shall be maintained so as to minimize VOC emissions into the cooling water. Faulty equipment shall be repaired at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs.

Emissions from the cooling tower are not authorized if the VOC concentration of the water returning to the cooling tower exceeds 0.042 ppmw. The VOC concentrations above 0.042 ppmw are not subject to extensions for delay of repair under this permit condition. The results of the monitoring and maintenance efforts shall be recorded.

25. The cooling tower (EPN F-CT-10) shall be operated and monitored in accordance with the following: **(6/22)**
- A. Each cooling tower shall be equipped with drift eliminators having manufacturer's design assurance of 0.0005% drift or less. Drift 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 1400 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, and 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 Requirements

26. The Plant Flare (EPN EP-5) shall be designed and operated in accordance with the following requirements:
- A. The combined natural gas and waste stream to the flare shall meet the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal, upset, and maintenance flow conditions. Flare testing per 40 CFR § 60.18(f) may be requested by the TCEQ Regional Office or any local air program with jurisdiction, in addition to New Source Performance Standard (NSPS) or federal requirements, to demonstrate compliance with this condition. Testing to confirm the heating value (Btu/scf) may be requested by the TCEQ Regional Office or any local air program with jurisdiction to demonstrate compliance with this condition.

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- B. The flare(s) shall be operated with a pilot flame present at all times and have a constant pilot flame or an automatic re-ignition system. The pilot flame shall be monitored by a thermocouple or an infrared monitor. If the pilot flame is extinguished, proper 30 TAC Chapter 101 procedures shall be followed for this incident.
 - 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 (for steam-assisted flares).
 - D. The flare shall comply with the Vent Gas Control provisions for HRVOCs found in 30 TAC Chapter 115, Subchapter H, effective December 23, 2004.
27. The Plant Flare (EPN EP-5) HRVOC emissions shall be monitored and recorded by a continuous online analyzer at least 95 percent of the time when the flare is operated as required in 30 TAC § 115.725(d)(3) to insure the maximum allowable emission rates table HRVOC's annual CAP is not exceeded. Compliance with the HRVOC CAP is based on a rolling 12-month period. During periods of monitor downtimes the requirements of 30 TAC § 115.725(d)(4) will be followed to determine compliance with the HRVOC annual CAP. The permit holder shall comply with all requirements of 30 TAC § 115.725(d).

Continuous Assurance Monitoring (CAM)

28. The following requirements apply to the capture system for the flare.
- A. The permit holder shall comply with the following:
 - (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 250 ppmv above background.
 - B. The control device shall not have a bypass.
 - 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.

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29. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment: **(01/17)**
- A. The requirements of paragraphs G and H 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:

 - (1) piping and instrumentation diagram (PID);
 - (2) a written or electronic database or electronic file;
 - (3) color coding;

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- (4) a form of weatherproof identification; or
 - (5) 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 Title 30 Texas Administrative Code Chapter 115 (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.
- F. 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 250 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.
- G. 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. 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.

- H. 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.
- I. Damaged or leaking valves or connectors found to be emitting VOC in excess of 250 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.
- J. 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 repair list times the number of days until the next scheduled unit shutdown is equal to or

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exceeds the total emissions from a unit shut down as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and 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.

- K. 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.
 - L. 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 G through H of this condition.
 - M. 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.
30. The leak definition level for identifying leaking or damaged valves, connectors, pumps, compressors, and agitator seals found to be emitting VOCs in Special Condition No. 29 shall be 250 ppmv instead of the applicable 500 ppmv, 2,000 ppmv, or 10,000 ppmv.

28CNTQ (Connectors Inspected Quarterly)

31. In addition to the weekly physical inspection required by Item E of Special Condition No. 29 all accessible connectors in gas/vapor and light liquid service shall be monitored quarterly with an approved gas analyzer in accordance with Items G thru K of Special Condition No. 29.
- A. Allowance for reduced monitoring frequencies.
 - (1) The frequency of monitoring may be reduced from quarterly to semiannually if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.
 - (2) The frequency of monitoring may be reduced from semiannually to annually if the percent of connectors leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.
 - B. If the percent of connectors leaking for any semiannual or annual monitoring period is 0.5 percent or greater, the facility shall revert to quarterly monitoring until the facility again qualifies for the alternative monitoring schedules previously outlined in this paragraph. The percent of connectors leaking used in paragraph A shall be determined using the following formula:
$$(CI + Cs) \times 100 / Ct = Cp$$

Where:

CI = the number of connectors found leaking by the end of the monitoring period, either by Method 21 or sight, sound, and smell.

Cs = the number of connectors for which repair has been delayed and are listed on the facility shutdown log.

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Ct = the total number of connectors in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including nonaccessible and unsafe-to-monitor connectors.

Cp = the percentage of leaking connectors for the monitoring period.

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32. Except as may be provided in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment: **(6/22)**

- 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:

- 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 Title 30 Texas Administrative Code Chapter 115 (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. In addition, all connectors shall be monitored by leak-

checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program in accordance with items F thru J of this special condition.

In lieu of the monitoring frequency specified above, connectors may be monitored on a semiannual basis if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Connectors may be monitored on an annual basis if the percent of connectors leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

If the percent of connectors leaking for any semiannual or annual monitoring period is 0.5 percent or greater, the facility shall revert to quarterly monitoring until the facility again qualifies for the alternative monitoring schedules previously outlined in this paragraph.

The percent of connectors leaking shall be determined using the following formula:

$$(CI + Cs) \times 100/Ct = Cp$$

Where:

CI = the number of connectors found leaking by the end of the monitoring period, either by Method 21 or sight, sound, and smell.

Cs = the number of connectors for which repair has been delayed and are listed on the facility shutdown log.

Ct = the total number of connectors in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including non-accessible and unsafe to monitor connectors.

Cp = the percentage of leaking connectors for the monitoring period.

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 by the end of the 72 hours 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 250 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 with a directed maintenance program. Non accessible valves shall be monitored by leak-checking for fugitive emissions at least annually using an approved gas analyzer with a directed maintenance program. 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. 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.

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.

A directed maintenance program shall consist of the repair and maintenance of components assisted simultaneously by the use of an approved gas analyzer such that a minimum concentration of leaking VOC is obtained for each component being maintained. Replaced components shall be re-monitored within 15 days of being placed back into VOC service.

- G. All new and replacement pumps, compressors, and agitators shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. These seal systems need not be monitored and 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.

All other pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly.

- H. Damaged or leaking valves, connectors, compressor seals, pump seals, and agitator seals found to be emitting VOC in excess of 250 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. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained. 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. 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 repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown 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.

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- I. 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, 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.
- J. 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.
- K. In lieu of the monitoring frequency specified in paragraph F, valves in gas and light liquid service may be monitored on a semiannual basis if the percent of valves leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Valves in gas and light liquid service may be monitored on an annual basis if the percent of valves leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

If the percent of valves leaking for any semiannual or annual monitoring period is 0.5 percent or greater, the facility shall revert to quarterly monitoring until the facility again qualifies for the alternative monitoring schedules previously outlined in this paragraph.

- L. The percent of valves leaking used in paragraph K shall be determined using the following formula:

$$(Vl + Vs) \times 100/Vt = Vp$$

Where:

Vl = the number of valves found leaking by the end of the monitoring period, either by Method 21 or sight, sound, and smell.

Vs = the number of valves for which repair has been delayed and are listed on the facility shutdown log.

Vt = the total number of valves in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including nonaccessible and unsafe to monitor valves.

Vp = the percentage of leaking valves for the monitoring period.

- M. Any component found to be leaking by physical inspection (i.e., sight, sound, or smell) shall be repaired or monitored with an approved gas analyzer within 15 days to determine whether the component is leaking in excess of 250 ppmv of VOC. If the component is found to be leaking in excess of 250 ppmv of VOC, it shall be subject to the repair and replacement requirements contained in this special condition.

Aqueous Ammonia Handling (NH₃)

- 33. Aqueous ammonia storage tanks shall be located within a physical barrier to traffic. Tank containment shall be employed with a minimum of 110 percent of tank volume. Vapors resulting from the filling operations of the aqueous ammonia storage tank(s) shall be collected and vapor returned back to the transport vessel.
- 34. The relief valve system shall be designed and operated to ensure that there are no working loss emissions to the atmosphere resulting from filling operations, and that there are no breathing losses during normal non-filling (standing) operations. The fill level of the aqueous ammonia storage tank

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shall not exceed a level that is in line with good engineering practices, and shall include a high level alarm and a high-high level alarm. In addition, sealless pumps shall be used in all piping handling aqueous ammonia.

35. Audio, visual and olfactory (AVO) checks for ammonia leaks shall be made once per day within the operating area.
 - A. No later than one hour following detection of a leak, plant personnel shall take the following actions:
 - (1) Locate and isolate the leak; and
 - (2) Use a leak collection or containment system to control the leak until repair or replacement can be made.
 - B. A component in no instance may be allowed to have a leak for more than 15 calendar days after the leak is found.

Wastewater Collection and Treatment

36. Process wastewater shall be immediately directed to a covered system. All lift stations, manholes, junction boxes and conveyances shall be covered to minimize emissions.
37. Wastewater treatment plant emissions shall be estimated every month using the following procedure.
 - A. The permit holder shall sample the wastewater prior to the Wastewater Aeration Ponds (EPN: WW-PN) monthly to determine the concentrations of all air contaminants. Sampling locations, sampling procedures, test methods and calculations shall be as specified in permit application, submitted October 1, 2012. The influent wastewater flow rates shall be measured and recorded when a sample required by this condition is collected. Records of sampling results shall be maintained for all air contaminants.
 - B. The permit holder shall calculate short term loading rate in terms of pounds per hour (lb/hr) and rolling 12 month loading rate in terms of tons per year (tpy) for each air contaminant. The measured concentrations of each speciated air contaminant shall be converted to an equivalent mass emission rate based upon the flow rates during the sample collection period using the calculation methods and assumptions in the permit application, submitted October 1, 2012. The short term emission rate calculations for such air contaminants shall be based on the concentrations and flow rates measured during sampling. The rolling 12 month emission rate calculation for each air contaminant shall be based on the rolling 12 month average contaminant concentration and the rolling 12 month wastewater flow. All other inputs into the calculation shall match those in the permit application for that averaging period (worst case). Total VOC mass emission rates shall be calculated as the sum of the individual speciated VOC mass emission rates.

Maintenance, Startup, and Shutdown

38. This permit authorizes the emissions for the following planned maintenance, startup, and shutdown (MSS) activities (EPNs MSS-BD and MSS-FLR):

Vessel clearing

Floating roof tank landings

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Additionally, this permit authorizes emissions from the following temporary facilities used to support planned MSS activities at permanent site facilities: portable control devices identified in Special Condition 42 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 Attachment, and (c) does not operate as a replacement for an existing authorized facility.

The performance of each planned MSS activity and the emissions associated with it shall be recorded and include at least the following information: **(6/22)**

- 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. 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.

39. Process units and facilities, with the exception of those identified in Special Condition No. 41 shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements. **(6/22)**

- 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.

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- 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 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 40. 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.
40. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below. **(6/22)**
- 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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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.

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:

500*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.

41. This permit authorizes emissions from EPNs MSS-BD and MSS-FLR for storage tank EPN TK-TBD 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.

(6/22)

- 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 250 ppmv. 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 40.
 - (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 (1) or (2) 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.
 - (2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:

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- (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 40.

- (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 the rates represented in the application, PI-1 dated March 5, 2020.
- (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 described in Sections 7.1.3.3 and 7.1.3.4 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 – Liquid Storage Tanks" dated March 2020 and the permit application.

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42. 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. **(6/22)**

A. Portable Flare

- (1) The heating value and velocity requirements in 40 CFR 60.18 shall be satisfied during operations authorized by this permit.
- (2) 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.

Recordkeeping

43. Records required in these special conditions shall be kept on site and made available upon request to the Executive Director of the Texas Commission on Environmental Quality (TCEQ), to his representative, and to air quality agencies with jurisdiction over this site. **(01/18)**
44. The following information shall be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and shall be made immediately available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction:
- A. Annual throughput records in accordance with Special Condition No. 7.
 - B. Records demonstrating compliance with AVO checks and maintenance as required by Special Condition No. 35.

Project Increase

45. The permit holder shall install a continuous flow monitor and calorimeter, on or before January 31, 2014 to monitor the flow and composition of the PIB WW Stripper overhead stream. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow and composition shall be recorded each hour. Each month the permit holder shall calculate the 12 month rolling average emission rate and demonstrate that the annual emissions routed to the flare from the PIB WW Stripper overhead stream do not exceed 68.33 tons per year.
- A. The flow monitor shall be calibrated on an annual basis and shall be accurate to within + 5 percent.
 - B. The calorimeter shall be calibrated, installed, operated, and maintained, in accordance with manufacturer recommendations.
 - C. The flow monitor and calorimeter shall operate as required by this section at least 95 percent of the time when the PIB WW Stripper is operational, averaged over a rolling 12-month period.

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Permit by Rule Sources (PBR)

46. The following sources are authorized under PBR by Title 30 Texas Administrative Code Chapter 106. This list is not intended to be all inclusive and may be altered without modifications to this permit. **(01/18)**

Authorization	Date	Source or Activity
PBR 146289	May 23, 2017	Tanks T-73 & T-74

Offset Conditions

47. This Nonattainment New Source Review (NNSR) permit is issued/approved based on the requirement that the permit holder offset the project emission increase for facilities authorized by this permit prior to the commencement of operation, through participation in the TCEQ Emission Banking and Trading (EBT) Program in accordance with the rules in 30 TAC Chapter 101, Subchapter H. **(6/22)**
48. The permit holder shall use 44.0 tons per year (tpy) of VOC credits to offset the 36.7 tpy VOC project emission increase for the facilities authorized by all permits associated with these projects (TCEQ Project Nos. 312936, 312937 and 312938) at a ratio of 1.2 to 1.0. **(6/22)**
49. Prior to the commencement of operation, the permit holder shall obtain approval from the TCEQ EBT Program for the credits being used and then submit a permit alteration or amendment request to the TCEQ Air Permits Division (and copy the TCEQ Regional Office) to identify approved credits by TCEQ credit certificate number. **(6/22)**
50. This permit is conditioned on the completion of all emission reduction projects represented in the most recent Table 3F, Project Contemporaneous Changes, submitted for the amendment with the PI-1 dated March 5, 2020. This reduction of emissions shall occur not later than the commencement of operation of the permitted facilities represented by this permit. The holder of this permit shall maintain records of the emission reductions and provide access and/or copies upon request to the TCEQ Executive Director, or representatives, or any local air pollution control program having jurisdiction. Construction of these facilities must commence as defined in 40 CFR 52.21(b)(9) Prevention of Significant Deterioration or 40 CFR 51.165(a)(1)(xvi) (nonattainment) no later than five years after the reductions are actually accomplished, or the above reductions are no longer creditable and the permit is automatically void. **(6/22)**

Greenhouse Gas Emissions

51. Permit holders must keep records sufficient to demonstrate compliance with 30 Texas Administrative Code § 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 Greenhouse Gas (GHG) 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. **(6/22)**

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52. Monitoring, quality assurance/quality control requirements, emission calculation methodologies, record keeping, and reporting requirements related to GHG emissions shall adhere to the applicable requirements in 40 CFR Part 98 and in this permit. **(6/22)**
53. Permittee shall calculate the CO_{2e} emissions on a 12-month rolling basis, based on the procedures and Global Warming Potentials (GWP) contained in Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1. **(6/22)**
54. Records of emissions of GHG, and how they were determined, in compliance with Special Condition Nos. 51, 52, and 53 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. **(6/22)**

Date: October 22, 2024