# **Special Conditions**

# Permit Number 146950

- 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 applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60):
  - A. Subpart A, General Provisions.
  - B. Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.
  - C. Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. (03/25)
  - D. Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced after September 18, 2015 and on or before December 6, 2022. **(03/25)**
- 4. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63: **(03/25)** 
  - A. Subpart A, General Provisions.
  - B. Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

# **Emission Standards and Operational Specifications**

- 5. Fuel used for the firewater pump engines (EPNs 78-32-47 and 78-32-48) shall be ultra-low sulfur diesel. Operation of the two fire pump engines is limited to three hours per week each (a total of 156 hours per year per engine). Operational records to demonstrate compliance with this condition shall be kept on site for five years. **(03/25)**
- 6. The Flare, emission point number (EPN 78-61-47) shall be designed and operated in accordance with the following requirements:
  - A. The flare shall be designed such that the combined assist natural gas and waste stream to the 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.

- B. The flare shall be equipped with a liquid knockout drum to remove any water and condensables from the gas stream prior to flaring.
- C. No flaring of halogenated compounds will be conducted.
- D. The flare shall not have a bypass
- E. 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.
- F. 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 or air assist to the flare.
- G. 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.
- H. The permit holder shall install a continuous flow monitor and a gas chromatography analyzer (GCA) with associated British thermal unit (Btu) calculations 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 monitor 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  $\pm 2.0$  percent at absolute temperature, and pressure monitor shall be  $\pm 5.0$  mm Hg.

The GCA shall be calibrated, operated, and maintained, in accordance with the manufacturer's recommendations, to continuously analyze, calculate, and record the net heating value of the gas sent to the flare, in British thermal units/standard cubic foot (Btu/scf) of the gas. The calibration shall be performed at least once per year.

The monitor and GCA 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. Hourly mass emission rates shall be determined and recorded using the above readings and the emission factors used in the permit application PI-1 dated May 24, 2017 and the subsequent submittals.

- 7. The Thermal Oxidizers (TO), EPNs 77-36-003 and 49-36-003 shall be designed and operated in accordance with the following requirements: **(02/19)** 
  - A. The TO shall maintain the VOC concentration in the exhaust gas less than 10 ppmv on a dry basis, corrected to 3 percent oxygen, or achieve a VOC destruction efficiency greater than 99.9 percent. Exhaust oxygen concentration shall be maintained at not less than 3 percent on a six-minute average while waste gas is being fed into the oxidizer.

- B. The TO firebox exit temperature shall be maintained at not less than 1400 °F while waste gas is being fed into the oxidizer prior to initial stack testing. After the initial stack test has been completed, the six minute average temperature shall be equal to, or greater than the respective hourly average maintained during the most recent satisfactory stack testing required by Special Condition 24. **(11/22)**
- C. The TO exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. The temperature measurement device shall reduce the temperature readings to an averaging period of 6 minutes or less and record it at that frequency. The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of  $\pm$  0.75 percent of the temperature being measured expressed in degrees Celsius or  $\pm 2.5^{\circ}$ C.
- D. The TO shall not have a bypass to the atmosphere.
- E. In cases of emergency, the TO may bypass to the flare. Emissions during emergency are not authorized by this permit and shall be reported under emission event rules.
- F. 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.
- G. Quality assured (or valid) data must be generated when the TO is operating except during the calibrations of the temperature measurement device. Loss of valid data due to periods of temperature measurement device 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 TO had operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.
- 8. The Cooling Towers (EPNs 78-22-47 and 49-22-47) shall be operated and monitored in accordance with the following requirements: **(02/19)** 
  - A. The owner or operator of a cooling tower with a design capacity to circulate 8,000 gallons per minute (gpm) or greater of cooling water shall:
    - (1) Install, calibrate, operate, and maintain a continuous flow monitor on each inlet of each cooling tower. Each monitor shall be calibrated on an annual basis to within ±5.0% accuracy. When the cooling tower flow monitor is down, flow measurements shall be used for the most recent 24-hour period in which the flow measurements are representative of cooling tower operations during monitor downtime.
    - (2) A continuous on-line monitor capable of providing total HRVOC and speciated HRVOCs in ppbw shall be installed. The sampling system for the continuous on-line monitoring system must be demonstrated equivalent to the air-stripping apparatus used in Appendix P for determining strippable HRVOC concentrations in the water as specified in subsection (f) of this section. The continuous on-line monitor system must satisfy the requirements of Sections 8.3, 10, 13.1, and 13.2 of 40 Code of Federal Regulations (CFR) Part 60, Appendix B, Performance Specification 9, as amended through October 17, 2000 (65 FR 61744). The multi-point calibration procedure in Section 10.1 of Performance Specification 9 must be performed at least once every calendar quarter instead of once every month. During out-of-order periods of the online HRVOC monitor(s) of 24 hours or greater, sampling must be performed for total and speciated HRVOC analysis according to the air-stripping method in Appendix P. Sampling must be performed at least three times per calendar week, with an interval of

no less than 36 hours between sampling times, until the continuous on-line monitor is properly operating and within the required performance specifications.

Cooling water VOC concentrations above 0.08 (0.15 if OVA is allowed) 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.

- B. Each cooling tower shall be equipped with drift eliminators having manufacturer's design assurance of 0.001% drift or less. Drift eliminators shall be maintained and inspected at least annually. The permit holder shall maintain records of all inspections and repairs.
- C. Total dissolved solids (TDS) shall not exceed 5,500 parts per million by weight (ppmw). Dissolved solids in the cooling water drift are considered to be emitted as particulate matter (PM), particulate matter less than 10 microns in diameter (PM<sub>10</sub>), particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>) in the proportions represented in the permit application calculations.
- D. Cooling towers shall be sampled at least once per week for TDS.
- E. 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 E(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.
- F. Emission rates of PM, PM<sub>10</sub> and PM<sub>2.5</sub> 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.
- 9. The Hot Oil Heaters (EPNs 77-36-1, 77-36-2, and 49-36-1) shall not exceed the following emission limits subject to the following specifications: **(08/21)** 
  - A. NOx during normal operations 0.01 lb/MMBtu on hourly and annual average.
  - B. CO 100 ppmvd corrected to 3% oxygen (O<sub>2</sub>) on one-hour average and 34 ppmvd corrected to 3% O<sub>2</sub> on a rolling 12-month average **(05/24)**.
  - C. NH<sub>3</sub> slip shall not exceed 10 ppmvd at 3% O<sub>2</sub> on an hourly average.
  - D. Maintenance, Startup, and Shutdown (MSS) Definitions/Operational Limitations
    - (1) Startup and shutdown as defined in this Special Condition are excluded from the limits listed above.
    - (2) The emissions from startup and shutdown shall not exceed the maximum hourly emission rates in the MAERT.
    - (3) Startup and shutdown definitions
      - (a) A startup is defined as the lighting of burners until the heater reaches 75 percent of the design firing rate.

- (b) A shutdown is defined as from the removal of unit charge until firing is stopped.
- (c) The startup and shutdown periods shall not exceed 16 hours.
- E. Annual heater-specific maintenance activities (excluding refractory curing and SCR maintenance) are excluded from the emission limits of this Special Condition and shall not exceed 100 hours per year per heater on a rolling 12-month basis. (03/25)
- F. SCR Maintenance
  - (1) NOx shall not exceed 0.038 lb/MMBtu.
  - (2) SCR maintenance is limited to 150 hrs/yr for EPN 77-36-1, 164.7 hrs/yr for EPN 77-36-2, and 426.3 hrs/yr for EPN 49-36-1, each on a rolling 12-month basis. **(03/25)**
- G. Refractory Curing is excluded from the emission limits of this Special Condition subject to the following specifications: (08/21)
  - (1) Each event per heater shall not exceed 100 hours.
  - (2) Each heater is limited to two refractory events per year.
  - (3) Only one heater may undergo refractory curing at a time.
- H. Control devices are started and operating properly when venting a waste gas stream.
- I. Fuel for the heaters is limited to pipeline quality, sweet natural gas containing no more than 0.25 grain hydrogen sulfide and 5 grain total sulfur per 100 dry standard cubic feet. 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.
- J. Visible emissions from the heaters shall not exceed 5 percent opacity, averaged over a sixminute period, as determined by EPA Reference Method 9, except for the periods described in Title 30 Texas Administrative Code (30 TAC) § 111.111(a)(1)(E).
- K. Stack sampling for nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), oxygen (O<sub>2</sub>) and (NH<sub>3</sub>) emissions at the maximum firing rate and shall be performed per the requirements in Special Condition 24.

# Storage and Loading of VOC

10. Storage tanks are subject to the following: (02/19)

Tank Identifier	Service	Fill/Withdrawal rate (gallons/hour)	Rolling 12 Month Throughput (gallons)
47-95-1	DEA (25 wt%)	19,500	148,050
48-95-1	DEA (25 wt%)	19,500	148,050
47-95-2	Fresh DEA (85 wt%)	12,000	120,000
48-95-2	Fresh DEA (85 wt%)	12,000	120,000
78-95-1	Diesel	845.97	3,400
78-95-2	Diesel	845.97	3,400

A. Storage tank throughput and service shall be limited to the following: **(03/25)** 

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49-95-WW	Wastewater	174,000	525,590
78-95-WW	Wastewater	174,000	525,590
49-95-SC	Spent Caustic	600	420,000
78-95-SC	Spent Caustic	600	420,000

Β. Uninsulated tank exterior surfaces exposed to the sun shall be white or aluminum. Storage tanks storing material with a vapor pressure greater than 0.5 psia at maximum storage temperature must be equipped with permanent submerged fill-pipes.

C. 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 12month 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.

- D. 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.
- E. Emissions for tanks shall be calculated using calculations in the permit application PI-1 dated May 24, 2017 and the subsequent submittals.

# **Loading Operations**

- Truck Loading (EPNs N-TLOAD and 49-N-TLOAD) shall be operated in accordance with the 11. following requirements: (02/19)
  - All loading shall be submerged and the permit holder shall maintain and update a monthly Α. emissions record which includes calculated emissions of VOC and NH<sub>3</sub> from all loading operations over the previous rolling 12 month period. The VOC liquids loading 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. The NH<sub>3</sub> unloading record under EPN N-TLOAD shall include the hose line disconnection event date. VOC emissions shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations", and NH<sub>3</sub> emissions shall be calculated according to the methodology in the permit application, PI-1 form dated January 24, 2025 and subsequent application updates associated with TCEQ Project No. 387956. (03/25)
  - Β. 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.

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

12. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:

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  - A. The requirements of paragraphs G and H shall not apply (1) where the Volatile Organic Compound (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;
- (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 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.

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 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.
- 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 exceeds the total emissions from a unit shut down as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEO 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.

# Fugitive Monitoring Requirement for Connectors in VOC Services – 28CNTQ

- 13. In addition to the weekly physical inspection required by Item E of Special Condition 12, 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 12.
  - 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:

- Cl = 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 nonaccessible and unsafe-to-monitor connectors.

# Cp = the percentage of leaking connectors for the monitoring period.Planned Maintenance, Startup and Shutdown (MSS) Activities

14. This permit authorizes the emissions from the facilities identified in Attachment C for the planned maintenance, startup, and shutdown (MSS) activities summarized in the MSS Activity Summary (Attachment B) attached to this permit.

Routine maintenance activities, as identified in Attachment A may be tracked through the work orders or equivalent. Emissions from activities identified in Attachment A 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 Attachment A and the emissions associated with it shall be recorded and include at least the following information:

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

- 15. Process units and facilities including fixed-roof storage tanks, with the exception of those identified in Special Condition 18 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 psia 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.

- - If mixed phase materials must be removed from process equipment, the cleared material Β. 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 psia at either the normal process temperature or 95°F, any vents in the system must be routed to a control device or a controlled recovery system. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. Control must remain in place until degassing has been completed or the system is no longer vented to atmosphere.
  - C. All liquids from process equipment or storage vessels must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be drained into a closed vessel unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour of being drained.
  - D. If the VOC partial pressure is greater than 0.50 psia 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 A, 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 16. 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 the internal of the vessel so as to minimize any air or dilution from the entry point. The facilities shall be degassed to the process, a control device or controlled recovery system until the VOC concentration is less than 10,000 ppmv or 10 % 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.

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  - E. Gases and vapors with VOC partial pressure greater than 0.50 psia 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 (boiler or flare).
    - (3) There is no more than 50 lbs. of air contaminant to be vented to atmosphere during shutdown or startup, as applicable.

All instances of venting directly to atmosphere per Special Condition 15E must be documented when occurring as part of any MSS activity. The emissions associated with venting without control must be included in the work order or equivalent for those planned MSS activities identified in Attachment A.

- 16. 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. The highest measured VOC concentration shall not exceed the specified VOC concentration limit prior to uncontrolled venting.
- B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.
  - (1) The air contaminant concentration measured is less than 80 percent of the range of the tube. If the maximum range of the tube is greater than the release concentration defined in (3), the concentration measured is at least 20 percent of the maximum range of the tube.
  - (2) The tube is used in accordance with the manufacturer's guidelines.
  - (3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

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

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

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

- C. Lower explosive limit measured with a lower explosive limit detector.
  - (1) The detector shall be calibrated monthly with a certified pentane gas standard at 25% of the lower explosive limit (LEL) for pentane. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.
  - (2) A daily functionality test shall be performed on each detector using the same certified gas standard used for calibration. 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.
- 17. This permit authorizes emission from the planned MSS activities for fixed-roof storage tanks in accordance with the following requirements:
  - A. 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 B 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 devolatilize 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
    - (2) Minimize time and VOC partial pressure.
      - (a) The VOC partial pressure of the liquid remaining in the tank shall not exceed 0.044 psia at 68oF as documented by the method specified in part D.(1) of this condition;
      - (b) Blowers may be used to move air through the tank without emission control at a rate not to exceed 500 cubic feet per minute (cfm) for no more than 8 hours. All standing liquid shall be removed from the tank during this period;
      - (c) Records shall be maintained of the blower circulation rate, the duration of uncontrolled ventilation, and the date and time all standing liquid was removed from the tank.
  - B. The tank may be opened without restriction and ventilated without control, after all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure less than 0.02 psia. These criteria shall be demonstrated in any one of the following ways.
    - (1) Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure of the liquid mixture remaining in the tank to less than 0.02 psia. This liquid shall be added during tank degassing if

practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC partial pressure may be estimated based on this information and engineering calculations.

- (2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:
  - (a) Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR 435 Subpart A, Appendix 1.
  - (b) Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).
  - (c) Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv through the procedure in Special Condition 16.
- (3) No standing liquid verified through visual inspection.

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

- C. Tank MSS emission shall be recorded and the 12-month emission shall be updated on a monthly basis. The 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) For the purpose of estimating emissions, the date, time, and other information specified for each of the following events:
    - (a) Start and completion of controlled degassing, and total volumetric flow,
    - (b) All standing liquid was removed from the tank or any transfers of VOC partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to < 0.02 psia, and
    - (c) If there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow.
  - (3) The estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events a and c with the data and methods used to determine it. The emissions associated with tank degassing and cleaning activities shall be calculated using the methods described in Section 7.1.3.2 or AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 – Storage of Organic Liquids" dated November 2006 and the permit application.
- 18. The roll-off boxes, frac tanks and temporary tanks are authorized in the MSS activities. They shall be operated in accordance with the following requirements:
  - A. The exterior surfaces of the tanks/vessels that are exposed to the sun shall be white or aluminum. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled.
  - B. The 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 100 gallons of liquid that are closed such that the vessel does not vent to atmosphere.

- - The permit holder shall maintain an emissions record which includes calculated emissions of D. VOC from all frac tanks during the previous calendar month and the past consecutive 12 month period. 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."
  - Ε. If the tank/vessel is used to store liquid with VOC partial pressure less than 0.10 psia 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.
- 19. The following requirements apply to vacuum truck operations to support planned MSS at this site:
  - Α. Vacuum pumps and blowers shall not be operated on trucks containing or vacuuming liquids with VOC partial pressure greater than 0.50 psia at 95°F unless the vacuum/blower exhaust is routed to a control device or a controlled recovery system.
  - Equip fill line intake with a "duckbill" or equivalent attachment if the hose end cannot be В. submerged in the liquid being collected.
  - C. A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.
    - Prior to initial use, identify any liquid in the truck. Record the liquid level and document (1)that the VOC partial pressure is less than 0.50 psia if the vacuum exhaust is not routed to a control device or a controlled recovery system. After each liquid transfer, identify the liquid transferred and document that the VOC partial pressure is less than 0.50 psia if the vacuum exhaust is not routed to a control device or a controlled recovery system.
    - For each liquid transfer made with the vacuum operating, record the duration of any (2) 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.
    - (3) 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 16A.
    - (4) 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 psia, 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 14A through 14D do not apply.

- 20. Additional MSS activities represented in the permit application may be authorized under permit by rule only if the procedures, emission controls, monitoring, and recordkeeping are the same as those required by this permit.
- 21. 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. Flare, EPN 78-61-47, shall comply with the requirements specified in Special Condition 6.
- B. All permanent facilities must comply with all operating requirements, limits, and representations in the permits identified in Attachment C during planned startup and shutdown unless alternate requirements and limits are identified in this permit. Alternate requirements for emissions from routine emission points are identified below.
- 22. With the exception of the MSS emission caps in the attached MAERT, these permit conditions become effective 180 days after the approval of the permit application, PI-1 dated February 12, 2013. During this period, monitoring and recordkeeping shall satisfy the requirements of Special Condition 14A through 14D. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded. The permit holder may maintain abbreviated records of emissions from Attachment A activities as allowed in Special Condition 18 rather than documenting all the information required by Special Condition 14A through 14<u>D</u>.
- 23. Planned maintenance activities must be conducted in a manner consistent with good practice for minimizing emissions, including the use of air pollution control equipment, practices and processes. All reasonable and practical efforts to comply with Special Condition 14 through 21 must be used when conducting the planned maintenance activity, until the commission determines that the efforts are unreasonable or impractical, or that the activity is an unplanned maintenance activity.

#### **Initial Demonstration of Compliance**

24. The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the stack of the TOs and the Hot Oil Heaters. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and the U.S. Environmental Protection Agency (EPA) Reference Methods. **(02/19)** 

Request 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 Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60) testing which must have EPA approval shall be submitted to the TCEQ Regional Director.

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- 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.
  - (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 turbine loads 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 submitting the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.

- B. Air contaminants emitted from the TOs to be tested for include (but are not limited to) VOC, CO, NO<sub>x</sub>, and SO<sub>2</sub>.
- C. Air contaminants emitted from the Hot Oil Heaters to be tested for include (but are not limited to) VOC, CO, NO<sub>x</sub>, and NH<sub>3</sub>.
- D. Sampling shall occur within 60 days after achieving the maximum operating rate, but not later than 180 days after initial startup of the TOs and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 63 requires the EPA approval, and requests shall be submitted to the TCEQ Regional Office.
- E. For the initial stack sampling, the TOs being sampled shall operate at maximum production rates during stack emission testing. These conditions/parameters and any other primary operating parameters (such as amine circulation rate) that affect the emission rate shall be monitored and recorded during the stack test. Any additional parameter 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 of TO 49-36-003, if the operating rate is greater than that recorded during the previous test period, stack sampling shall be performed at the new operating conditions within 120 days. During subsequent operations of TO 77-36-3, if the amine circulation rate is greater than that recorded during the previous 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. **(02/23)** 

- F. Stack sampling for the TOs shall be repeated after the initial sampling in accordance with A, B, D and E of this condition, and the following:
  - (1) Stack testing shall be performed annually. Upon three consecutive satisfactory stack tests, subsequent stack testing shall be repeated once every three years.

- (2) Following any unsatisfactory stack test, the applicant shall perform annual stack testing in accordance with Special Condition 24(F)(1).
- (3) Following two consecutive unsatisfactory stack tests, the applicant shall submit a permit application to the TCEQ for the updating of permit emission representations and the installation of a CEMS. This permit application must be submitted within 60 days of the second consecutive unsatisfactory stack test.
- G. 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:
  - (1) One copy to the TCEQ Regional Office.
  - (2) One copy to the local air pollution control program.

# **Continuous Demonstration of Compliance**

- 25. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> and NH<sub>3</sub> from the Hot Oil Heaters. **(02/19)** 
  - 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, Title 40 Code of Federal Regulation Part 60 (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, ' 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 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 permit holder shall install and operate a fuel flow meter to measure the gas fuel usage for the Hot Oil Heaters. The monitored data shall be reduced to an hourly average flow rate at least once every day, using a minimum of four equally-spaced data points from each one-hour period. 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. In lieu of monitoring fuel flow, the permit holder may monitor stack exhaust flow using the flow monitoring specifications of 40 Code of Federal Regulations (CFR) Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A.
- D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
- E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
- F. Quality-assured (or valid) data must be generated when the Hot Oil Heaters are operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the Hot Oil Heaters are 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.
- 26. The NH₃ concentration in each heater Stack shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to the frequency listed below. Testing for NH₃ slip is only required on days when the NH₃ injection to the SCR unit is in operation. (02/19)
  - A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected and reported.
  - B. The permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the duct burners and the SCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> slip. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR unit. These results shall be recorded and used to determine compliance.
  - C. The permit holder may install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS and the other exhaust stream would be routed through a NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> slip concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings (converted and unconverted).
  - D. As an approved alternative, the NH<sub>3</sub> slip may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the 5 to 10 ppm range. The frequency of sorbent/stain tube testing shall be daily for the first 60 days of operation, after which, the frequency may be reduced to weekly testing if operating procedures have been developed to prevent excess amounts of urea from being introduced in the SCR unit and when operation of the SCR unit have been proven successful with regard to controlling NH<sub>3</sub> 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 Special Condition No. 9.

- E. If the sorbent or stain tube testing indicates an ammonia slip concentration exceeds 10 ppm for a consecutive one-hour period or the average of one or more sorbent or stain tube tests in an hour, the permit holder shall begin NH<sub>3</sub> 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 of stain tube testing. The quarterly testing shall continue until such time as the SCR unit catalyst is replaced; or if the quarterly testing indicates NH<sub>3</sub> slip is 7 ppm or less, the Phenol-Nitroprusside/Indophenol/CTM 27 tests may be suspended until sorbent/stain tube testing again indicate 10 ppm NH<sub>3</sub> slip or greater. These results shall be recorded and used to determine compliance with Special Condition No. 9.
- F. Any other method used for measuring NH<sub>3</sub> slip shall require prior approval from the TCEQ Regional Office.

# **Projected Actual Emissions Tracking (03/25)**

27. The project associated with the permit application PI-1 dated January 24, 2025 and subsequent application updates associated with TCEQ NSR Project No. 387956 was determined to not be subject to major new source review through the use of projected actual emission (PAE) rates for one or more facilities associated with the project. Actual emissions from the sources using a projected actual as listed in the tables of this special condition shall be monitored as represented in the application and records maintained and reports provided in accordance with 30 TAC 116.127. Records shall be maintained for five calendar years from the resumption of regular operations. Records shall include the date of resumption of regular operations after the project change.

A report is due to the Executive Director in any calendar year in which the actual emissions for the project for any pollutant exceed the total baseline actual emissions in the tables below by the netting significant emission rate (i.e., 5 tpy for NOx) or the PSD new major source threshold (i.e., 250 tpy for each PSD regulated pollutant, NOx and CO) and a projected actual emission for any facility for that same pollutant is exceeded in accordance with 30 TAC 116.127(d).

Pollutant: NOv							
Fullularit.							
Applicatio	n project emissions	increase: 4.9	9 tpy				
Net project	ct increase: N/A – r	netting not trigg	ered				
FIN/ EPN	Source Name	Baseline Actual Emissions (tpy)	Post Project Allowable (tpy)	Projected Actual Emissions (tpy)	Could Have Accommodated Increment Correction (tpy)	Monitoring Special Condition Numbers	
49-36-1	Hot Oil Heater 1	3.35	15.79			25	
77-36-1	Hot Oil Heater 1	4.98	14.60	21.97	4.17	25	
77-36-2 Hot Oil Heater 2 4.48 14.66 25				25			
Total Baseline Actual (tpy) 12.81			-	-			

Pollutant:	СО					
Applicatio	n project emissions	increase: 87.4	46 tpy			
Net projec	Net project increase: N/A – netting not triggered					
FIN/ EPN	Source Name	Baseline Actual Emissions (tpy)	Post Project Allowable (tpy)	Projected Actual Emissions (tpy)	Could Have Accommodated Increment Correction (tpy)	Monitoring Special Condition Numbers
49-36-1	Hot Oil Heater 1	0.30	37.08	91.38	N/A	25

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77-36-1	Hot Oil Heater 1	0.55	37.08		N/A	25
77-36-2	Hot Oil Heater 2	3.07	37.08		N/A	25
Total Baseline Actual (tpy)		3.92	-	-	-	-

# Recordkeeping

28. The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site; records shall be available at the request of personnel from the TCEQ or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained.

Date: March 12, 2025

# ATTACTMENT A

Permit Number 146950

# ROUTINE MAINTENANCE ACTIVITIES

Repair/replacement of components such as pumps, valves, and filters that may be isolated so that the process volume to be emptied and degassed is less than 50 cubic feet.

Repair/replacement of facilities such as compressors and heat exchangers that may be isolated so that the process volume to be emptied and degassed is less than 50 cubic feet.

Date: May 31, 2018

## ATTACHMENT B

## Permit Number 146950

# MSS ACTIVITY SUMMARY

The activities identified in the table below are authorized for the facilities indicated and are subject to the emission limits identified in the table. Startup and shutdown of facilities that are compliant with Special Condition 15 are authorized by this permit.

Facilities	Description	Emissions Activity	EPN
all process	process unit	vent to flare	N-MSS
units	shutdown/depressurize/drain		49-N-MSS
all process	process unit startup	vent to flare	N-MSS
units			49-N-MSS
all process unit	preparation for facility/component	depressurize/degas/purge to	N-MSS
facilities	repair/replacement	flare	49-N-MSS
all process unit	recovery from facility/component	vent to flare	N-MSS
facilities	repair/replacement		49-N-MSS
all process	preparation for unit turnaround or	remove liquid	N-MSS
units and tanks	facility/component		49-N-MSS
	repair/replacement		
all process	preparation for unit turnaround or	remove liquid	N-MSS
units and tanks	facility/component		49-N-MSS
	repair/replacement		

Date: February 13, 2019

#### ATTACHMENT C

# Permit Number 146950

FACILITY LIST

This permit authorizes emissions from the following temporary facilities used to support planned MSS activities at permanent site facilities: frac tanks/vessels, vacuum trucks, and roll-off boxes that are identified in Special Condition Nos. 19, 20, and 22B. 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.

This permit authorizes MSS emissions from the permanent site facilities identified below. The headings for each group of facilities (Process Units, Tanks, etc.) are used in the MSS Activity Summary to identify all facilities in the respective group.

Process Units		
EPN	Facility Name	Permit
N-FUG	NGL Fractionation Plant	146950
49-N-FUG	NGL Fractionation Plant	146950
<u>Flare</u>		
EPN	Facility Name	Permit
78-61-47	Flare	146950
<u>Heaters</u>		
EPN	Facility Name	Permit
49-36-1	Hot Oil Heater	146950
77-36-1	Hot Oil Heater 1	146950
77-36-2	Hot Oil Heater 2	146950
<b>Combustion Uni</b>	<u>ts</u>	
EPN	Facility Name	Permit
49-36-003	Thermal Oxidizer	146950
77-36-003	Thermal Oxidizer	146950
<u>Tanks</u>		
EPN	Facility Name	Permit
47-95-1	Lean DEA Storage Tank	146950
48-95-1	Lean DEA Storage Tank	146950
47-95-2	Fresh DEA Storage Tank	146950
48-95-1	Fresh DEA Storage Tank	146950
49-95-3	Fresh DEA Storage Tank	146950
78-95-1	Diesel Storage Tank – 1	146950
78-95-2	Diesel Storage Tank – 2	146950
49-95-WW	Wastewater Storage Tank	146950
49-95-SC	Spent Caustic Tank	146950
78-95-WW	Wastewater Storage Tank	146950
78-95-SC	Spent Caustic Tank	146950

Date: March 12, 2025