

## Special Conditions

Permit Number 6606

### Emission Standards

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating requirements specified in the special conditions.

### Federal Applicability

2. Storage tank numbers, 28071, 28072, 28073, 28074, 28075, 28076 and 28080 shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60): **(draft)**
  - A. Subpart A: General Provisions.
  - B. Subpart Ka: Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984.
3. Storage tank numbers 28086, 28087, 28088, 28089, 28090, shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60): **(draft)**
  - A. Subpart A: General Provisions.
  - B. Subpart Kb: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.
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 in 40 CFR Part 61:
  - A. Subpart A: General Provisions.
  - B. Subpart M: National Emissions Standard for Asbestos.
5. The barge and ship dock shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants in 40 CFR Part 63:
  - A. Subpart A: General Provisions.
  - B. Subpart Y: National Emission Standards for Marine Tank Vessel Loading Operations.

### Operational Practices

6. This permit authorizes the storage of crude oil and stabilized condensate in all floating roof storage tanks and refined fuel products with a vapor pressure less than crude oil, such as naphtha, diesel, No. 6 oil and coker gas oil. Storage of other chemicals is prohibited unless prior authorization for such storage is obtained. Only four floating roof storage tanks may be emptied at the represented withdrawal rate at any given time. **(draft)**

Crude oil and stabilized condensate stored in tanks at the Ingleside Terminal shall be limited to hydrogen sulfide (H<sub>2</sub>S) concentrations of 100 ppmw on an annual average basis and 500 ppmw on an hourly basis. Compliance with the H<sub>2</sub>S concentration limits shall be demonstrated by sampling the material in each tank twice monthly if the American Petroleum Institute (API) gravity is less than or equal to 25 and annually if the API gravity is greater than 25, and each time the tank's service is changed using a Lead Acetate Paper (LAP) Test (ASTM D5705 – Standard Test Method for Measurement of Hydrogen Sulfide in the Vapor Phase Above Residual Fuel Oils with the following modifications: 1) lead acetate paper shall be used rather than stain detector tubes; 2) crude oil sample collection shall be in accordance with ASTM D4057; 3) the crude oil shall not be heated; 4) the vapor space shall not be purged with nitrogen; and 5) the headspace of the sample shall be tested as received.) A negative LAP test result shall indicate that the H<sub>2</sub>S concentration of the material is below the limits and shall be recorded as a concentration of 0.0297 ppmw. Should an LAP test indicate a positive result, further analysis shall be completed via Lead Acetate Reaction Rate testing for H<sub>2</sub>S in crude oil (ASTM D4084-82 – Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels; ASTM D4468-85, Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry; and ASTM D4045-81, Standard Test Method for Sulfur in Petroleum Products by Hydrogenolysis and Rateometric Colorimetry; or subsequently approved ASTM methods) utilizing an Analytical Systems International Keco 205L H<sub>2</sub>S in Liquids Analyzer or subsequent generation equivalent analyzer to demonstrate compliance with the H<sub>2</sub>S limits. The H<sub>2</sub>S analyzer shall be calibrated according to manufacturer recommendations.

The permit holder shall calculate and record a rolling 12-month average H<sub>2</sub>S concentration. Records of the H<sub>2</sub>S sampling, test method(s) used, and H<sub>2</sub>S concentrations shall be maintained on site for a period of five years and shall be made readily available to representatives of the TCEQ upon request. For tanks' change of service, a point-of-purchase receipt or seller's records may be used to demonstrate H<sub>2</sub>S compliance in lieu of the LAP test. **(draft)**

7. This permit authorizes ship or barge loading of crude oil and stabilized condensate only. Loading of other chemicals into barges or ships is prohibited unless prior authorization for such storage is obtained.

Total combined throughput of the barge and ship loading of crude oil and stabilized condensate is limited to 187,200,000 barrels per rolling twelve months. Records of crude oil and stabilized condensate barge and ship loading product throughput shall be maintained for a period of five years and made readily available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request. **(draft)**

Crude oil and stabilized condensate loaded into barges or ships at the Ingleside Terminal shall be limited to maximum hydrogen sulfide (H<sub>2</sub>S) concentrations of 15 ppmw on an average hourly and annual average basis. Compliance with the H<sub>2</sub>S concentration limits shall be demonstrated by sampling the material loaded into each barge or ship, using a Lead Acetate Paper (LAP) Test (ASTM D5705 – Standard Test Method for Measurement of Hydrogen Sulfide in the Vapor Phase

Above Residual Fuel Oils with the following modifications:

1) lead acetate paper shall be used rather than stain detector tubes; 2) crude oil sample collection shall be in accordance with ASTM D4057; 3) the crude oil shall not be heated; 4) the vapor space shall not be purged with nitrogen; and 5) the headspace of the sample shall be tested as received.) A negative LAP test result shall indicate that the H<sub>2</sub>S concentration of the material is below the limits and shall be recorded as a concentration of 0.0297 ppmw. Should an LAP test indicate a positive result, further analysis shall be completed via Lead Acetate Reaction Rate testing for H<sub>2</sub>S in crude oil (ASTM D4084-82 – Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels; ASTM D4468-85, Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry; and ASTM D4045-81, Standard Test Method for Sulfur in Petroleum Products by Hydrogenolysis and Rateometric Colorimetry; or subsequently approved ASTM methods) utilizing an Analytical Systems International Keco 205L H<sub>2</sub>S in Liquids Analyzer or subsequent generation equivalent analyzer to demonstrate compliance with the H<sub>2</sub>S limits. The H<sub>2</sub>S analyzer shall be calibrated according to manufacturer recommendations. The permit holder shall calculate and record a rolling 12-month average H<sub>2</sub>S concentration. Records of the H<sub>2</sub>S sampling, test method(s) used, and H<sub>2</sub>S concentrations shall be maintained on site for a period of five years and made readily available to representatives of the TCEQ upon request.

**(Draft)**

8. Collected VOC emissions from loading into inerted marine vessels crude oil and stabilized condensate with a maximum true vapor pressure equal to or greater than 0.50 pounds per square inch, absolute (psia) at maximum loading temperature shall be routed to the Marine Vapor Combustion Unit designated as EPN MVCU. The inerted vessel loading dock shall utilize submerged fill and is not required to use vacuum-assisted vapor collection.

Collected VOC emissions from loading into non-inerted marine vessels crude oil and stabilized condensate with a maximum true vapor pressure equal to or greater than 0.50 pounds per square inch, absolute (psia) at maximum loading temperature shall be routed to the Marine Vapor Combustion Unit designated as EPN MVCU using a vacuum-assisted vapor collection system. Loading of crude oil and stabilized condensate with a maximum true vapor pressure equal to or greater than 0.50 psia at maximum loading temperature shall be immediately stopped if the vacuum-assisted vapor collection system is inoperative. Loading of crude oil and stabilized condensate with a maximum true vapor pressure equal to or greater than 0.5 psia at maximum loading temperature shall not start or re-start until the vacuum-assisted vapor collection system is operational. The non-inerted loading dock shall utilize submerged fill. **(6/18)**

9. The following additional requirements apply to loading of a VOC which has a vapor pressure equal to or greater than 0.5 pounds per square inch absolute (psia) under actual storage conditions onto inerted marine vessels.
  - A. Before loading, the owner or operator of the marine terminal shall verify that the marine vessel has passed an annual vapor tightness test as specified in 40 CFR §63.565(c) (September 19, 1995) or 40 CFR §61.304(f) (October 17, 2000) within the previous twelve months.
  - B. The pressure at the vapor collection connection of an inerted marine vessel must be maintained such that the pressure in a vessels' cargo tanks do not go below 0.2 pounds per square inch gauge (psig) or exceed 80% of the lowest setting of any of the vessel's pressure relief valves. The lowest vessel cargo tank or vent header pressure relief valve setting for the vessel being loaded shall be recorded. Pressure shall be continuously monitored while the vessel is being loaded. Pressure shall be recorded at fifteen-minute intervals.
  - C. Crude and/or stabilized condensate loading rates shall be recorded during loading. The loading rate must not exceed the maximum permitted loading rate.

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- D. During loading, the owner or operator of the marine terminal or of the marine vessel shall conduct audio, olfactory, and visual checks for leaks once every 8 hours for on-shore equipment and on board the ship.
- (1) If a liquid leak is detected during loading and cannot be repaired immediately (for example, by tightening a bolt or packing gland), then the loading operation shall cease until the leak is repaired.
  - (2) If a vapor leak is detected by sight, sound, smell, or hydrocarbon gas analyzer during the loading operation, then a "first attempt" shall be made to repair the leak. Loading operations need not be ceased if the first attempt to repair the leak is not successful provided that the first attempt effort is documented by the owner or operator of the marine vessel and a copy of the repair log is made available to a representative of the marine terminal.
  - (3) If the attempt to repair the leak is not successful and loading continues, emissions from the loading operation for that inerted vessel shall be calculated assuming a collection efficiency of 95%.
  - (4) Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.
- E. Compliance with Special Condition No. 9 shall be required upon issuance of the permit revision dated June 6, 2018. **(6/18)**
10. VOC collection efficiency tests of inerted ocean-going marine vessels shall be conducted as follows to demonstrate a collection efficiency of 99.9% as represented in the permit application. **(1/19)**
- A. Testing shall be conducted using the protocol agreed to by the Executive Director in October 2016. Any revision to the approved testing protocol shall require approval from the Executive Director prior to implementation. The permittee shall maintain a copy of the approved protocol on site.
  - B. Complying test results shall be obtained in accordance with the protocol for a minimum of one vessel per year for 3 years. The first test shall be conducted within twelve months of the first loading of an inerted ocean-going marine vessel. Tests conducted on January 29, 2015 and December 19, 2015 shall satisfy the requirements of the first two tests.
  - C. The results of the test shall be submitted to the TCEQ Regional Office with a copy to the TCEQ Air Permits Division within 60 days after completion of the test.
  - D. The TCEQ Regional Office must be notified at least 48 hours prior to testing. The facility owner or operator may request a waiver from the 48-hour advance notification requirement from the TCEQ Regional Office.
  - E. The permit holder shall maintain the following records for each ship tested for a period of 5 years from the date of testing:
    - (1) The most recent vapor tightness certificate;
    - (2) A recent, completed Standard Tanker Chartering Questionnaire form (Q88); and
    - (3) Records of each incidence of testing conducted in accordance with this condition.
11. The following requirements apply if a test conducted per Condition 10 shows collection efficiency lower than assumed in permit emission calculations.

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- A. Emissions from the tested ship shall be calculated at the measured collection efficiency instead of the efficiency assumed for permit calculations.
  - B. Emissions from future instances of ship loading shall continue to be calculated at the lower measured collection efficiency until a test result confirming the permitted collection efficiency is obtained.
  - C. As an alternative to assuming the lower measured collection efficiency for subsequent loading as specified in paragraph B, the regulated entity can assume the permitted collection efficiency in subsequent loading operations provided that the loading activity is monitored with an optical gas imaging instrument as defined in 30 TAC 115.358 and no leaks are observed. If a leak is observed, the lower measured collection efficiency must be used. The observations must occur during a minimum 6-hour period as close to the end of loading as possible.
12. Barges and ships loaded with crude oil and stabilized condensate with a maximum true vapor pressure equal to or greater than 0.50 psia at the barge and ship terminal spots authorized in this permit shall be leak-tested once in a 12-month period using the leak testing methods of NESHAP, Subpart BB. A set of records shall be accessible at the terminal site pursuant to each requirement listed in 40 CFR § 61.305(h) to certify the leak testing has been completed to allow loading of VOC liquids with a true vapor pressure equal to or greater than 0.50 psia. A barge and ship shall not be loaded with any VOC liquids with a true vapor pressure equal to or greater than 0.50 psia at this barge and ship terminal loading station if no valid proof of the leak testing is shown.
  13. The holder of this permit shall maintain the connections within the non-inerted vessel vapor collection system in a vapor tight manner when loading crude oil and stabilized condensate that has a maximum true vapor pressure equal to and greater than 0.50 psia at maximum loading temperature.

If connections within the non-inerted vapor collection system are not maintained and operating vapor tight while loading liquid VOC with a true vapor pressure equal to and greater than 0.50 psia, the loading process shall cease within two hours of discovery of the malfunction. Additional loading requiring vapor tight non-inerted vessel vapor collection system connections should not begin until the problem(s) with the vapor tight connections are corrected. Records shall be kept accessible at the plant site on a rolling five-year basis when vapor tight connections are not maintained and operating and what repairs were done to correct the problem(s).
  14. A pressure monitoring device shall be installed at the common point of the vapor collection system between the liquid knockout pot and the vacuum blowers to continuously measure pressure in the non-inerted vessel loading vapor collection system during loading of crude oil and stabilized condensate with a maximum true vapor pressure equal to and greater than 0.50 psia. The vapor collection piping will be all welded between the Dock Safety Unit discharge flange and the vacuum blower liquid knockout pot inlet flange with the exception of flanged connections necessary to perform periodic MSS activities. A blower system shall be installed which will produce a vacuum in the loading system. The average pressure at the liquid knockout pot discharge shall be maintained at a negative pressure of at least 1.5 inches water column during a loading period of crude oil and stabilized condensate with a maximum true vapor pressure equal to and greater than 0.50 psia. The vacuum shall be recorded every fifteen minutes during crude oil and stabilized condensate loading. In the event the pressure monitoring device is not functioning properly, non-inerted vessel loading operations for crude oil and stabilized condensate with a maximum true vapor pressure equal to or greater than 0.50 psia requiring use of the Marine Vapor Combustion Unit as an emission control device shall cease within two hours of malfunction. Additional loading requiring use of the Marine Vapor Combustion Unit should not begin until the problems with pressure monitoring device(s) are repaired. **(draft)**

Quality assured (or valid) data must be generated when non-inerted vessels are loaded with crude oil and stabilized condensate with a maximum true vapor pressure equal to or greater than 0.50 psia at this dock. 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 non-inerted vessel loading dock operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

### Storage and Loading of Volatile Organic Compounds (VOC)

15. 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:
    - (1) Perform the visual inspections and seal gap measurements as specified in Title 40 Code of Federal Regulations § 60.113b (40 CFR § 60.113b) Testing and Procedures (as amended at 54 FR 32973, Aug. 11, 1989) to verify fitting and seal integrity.
    - (2) As an alternative to § 60.113b the permit holder may perform the visual inspections and seal gap measurement in accordance with § 63.1063(d) of 40 CFR Part 63, Subpart WW as allowed by 40 CFR § 60.110b(e) [as amended at 86 FR 5019, Jan. 19, 2021. **(05/21)**]
    - (3) 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 the version of API Code 650 in effect at time of construction 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. Except for logos, slogans, identification numbers and similar displays (not to exceed 15 percent of the vertical tank shell area), uninsulated tank exterior surfaces exposed to the sun shall be white or aluminum.
  - F. Emissions for tanks shall be calculated using: (a) AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" and (b) the TCEQ publication, titled "Technical Guidance Package for Chemical Sources-Storage Tanks."

### Recordkeeping

16. The fire water pump engines shall be limited to firing ultra-low sulfur diesel (ULSD) fuel containing no more than 15 ppm sulfur by weight. For fuel designated ultra-low sulfur diesel on the receipt, this is acceptable as showing compliance with sulfur limitations of this permit. Otherwise, in order to show compliance with the 15 ppmw maximum sulfur limit, the permit holder shall keep records of the sulfur content of the fuel based on receipts or chemical analyses. The analysis may be performed by the permit holder, service contractor, fuel vendor, or any other qualified agency. The engines shall also be equipped with a non-resettable runtime meter.

Records shall be kept of all fire water pump engine testing and operations and each engine is limited to 100 hours of planned operation per rolling twelve months. Planned operation of the two fire water pump engines is limited to a combined four hours in any 24-hour period. The records shall include the time and duration that each fire water pump engine is in use and shall be used to calculate annual and hourly emissions to show compliance with the maximum allowable emission rates table. All records shall be maintained for a five-year rolling period. Records shall be made readily available upon request of TCEQ personnel. **(10/20)**

17. For purposes of assuring compliance with the annual VOC emission value shown on the MAERT for each EPN, the holder of this permit shall maintain a monthly emissions record which describes calculated emissions of VOC from all storage tanks and loading operations. The record shall include tank or loading point identification number, control method used, tank or vessel capacity, name of the material stored or loaded, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia and VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures. Compliance with the annual emissions MAERT value for each EPN shall be based on a 12-month rolling average. Compliance with this condition includes and meets the requirements of Special Condition No. 15.F.
18. For permit amendment (initial application received April 20, 2018) pertaining to Ingleside Terminal Expansion Project, the incremental increase in emissions methodology was used for the following non-modified affected facilities to determine the difference between projected actual emissions and baseline actual emissions while excluding emissions following the project that the facilities could have accommodated and that are unrelated to the project:

EPN	Facility
28067	Tank 28067
28068	Tank 28068
28069	Tank 28069
28070R	Tank 28070R
28071	Tank 28071
28072	Tank 28072
28073	Tank 28073
28074	Tank 28074
28075	Tank 28075
28076	Tank 28076
28077	Tank 28077
28080	Tank 28080

28082	Tank 28082
28083	Tank 28083
28086	Tank 28086

For each of these facilities, the permit holder shall calculate and maintain a record of the incremental annual emissions increase resulting from the Ingleside Terminal Expansion Project, in tons per year, on a calendar year basis, for a period of five years following resumption of regular operations following the Ingleside Terminal Expansion Project. The permit holder shall submit a report to the Executive Director if the actual emissions from the project exceed the baseline actual emissions by a significant amount for that pollutant, and the incremental increase in emissions from any of these facilities exceeds the incremental increase represented in the permit amendment application. The report shall be submitted to the Executive Director within 60 days of the calendar year and shall contain:

- (1) The name, address and telephone number of the major stationary source; and
- (2) The calculated incremental emissions increases.

The permit holder shall make the information required to be documented and maintained by this special condition available for review upon the request of the Executive Director or local air pollution control program. **(1/19)**

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

19. Sampling ports and platform(s) shall be incorporated into the design of Marine Vapor Combustion Unit No. 1 (EPN MVCU1), Marine Vapor Combustion Unit No. 2 (EPN MVCU2), and Marine Vapor Combustion Unit No. 3 (EPN MVCU3) according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" of the TCEQ Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director. **(1/19)**
20. The permit holder shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from EPNs MVCU1, MVCU2, and MVCU3 to demonstrate compliance with the MAERT and percent VOC abatement shown in Special Condition No. 24. 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. EPA Reference Methods. **(1/19)**

Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for 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.

- A. The appropriate TCEQ Regional Office shall be notified not less than 30 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 like the maximum inerted or non-inerted vessel crude oil and stabilized condensate loading value recorded in gallons or barrels per hour during the sampling period.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.

- B. Air contaminants emitted from EPNs MVCU1, MVCU2, and MVCU3 to be tested for include (but are not limited to) CO, NO<sub>x</sub>, SO<sub>2</sub> and VOC. **(1/19)**
- C. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial start-up of the facilities tied to EPNs MVCU1, MVCU2, and MVCU3 and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate regional office. **(1/19)**
- D. The facility being sampled shall operate under maximum inerted or non-inerted vessel crude oil and stabilized condensate loading operations during Marine Vapor Combustion Unit stack emission testing. Maximum inerted or non-inerted vessel crude oil and stabilized condensate loading operations shall be recorded in gallons or barrels loading in sampling time. These conditions/parameters and any other primary operating parameters that affect the emission rate shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.  
  
During subsequent operations, if the maximum inerted or non-inerted vessel crude oil and stabilized condensate loading operations recorded in gallons or barrels per hour is greater than that recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the region. **(6/18)**
- E. One copy of the final sampling report shall be forwarded to the appropriate TCEQ Regional Office 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.

### Process Fugitive Monitoring

#### 21. Piping, Valves, Pumps, and Compressors – 28 VHP **(draft)**

- 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.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open-ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;

- (1) a cap, blind flange, plug, or second valve must be installed on the line or valve;
- or
- (2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once within the 72-hour period following the creation of the open-ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and

must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. If a relief valve is equipped with rupture disc, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity.

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

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

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

- G. Except as may be provided for in the special conditions of this permit, all pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.
- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump, compressor, and agitator seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days and a record of the attempt shall be maintained.
- I. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging within 15 days of the detection of the leak. A listing of all components that qualify for delay of repair shall be maintained on a delay

of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of 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) or 500 pounds, whichever is greater, the TCEQ Regional Manager and any local programs shall be notified and the TCEQ Executive Director may require early unit shut down or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

- J. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.
  - K. Alternative monitoring frequency schedules of 30 TAC 115.352 - 115.359 or National Emission Standards for Organic Hazardous Air Pollutants, 40 CFR Part 63, Subpart H, may be used in lieu of Items F and G of this condition.
  - L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS) and does not constitute approval of alternative standards for these regulations.
  - M. The 28VHP LDAR shall be implemented within 90 days of this permit (TCEQ Project # 327436) issuance.
22. Piping, Valves, Pumps, and Compressors in Petroleum Service
- A. Audio, olfactory and visual checks for petroleum product leaks and crude oil and stabilized condensate leaks within the operating area shall be made monthly.
  - B. A leaking component shall be repaired as soon as practicable, but no later than 15 days after a leak is found. If the repair or replacement of a leaking component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired or replaced until a scheduled shutdown shall be identified in a list to be made available to representatives of the TCEQ upon request.
- Records shall be accessible at the plant site of all repairs and replacements made due to leaks. These accessible records shall be made available to representatives of the TCEQ upon request.
23. Piping, Valves, Pumps, Flanges, Connectors and Compressors in Hydrogen Sulfide (H<sub>2</sub>S) Service
- A. Visual, audio and olfactory checks for H<sub>2</sub>S leaks within the operating area shall be made at least once per day.
  - B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall isolate the leak and

- (1) Commence repair or replacement of the leaking component, or
- (2) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records of all repairs and replacements resulting from leaks shall be maintained at this site. These records shall be maintained for a period of five years and shall be made readily available to TCEQ representatives upon request.

### Marine Vapor Combustion Units

24. The firebox temperatures of EPNs MVCU1, MVCU2, and MVCU3 shall be monitored continuously and recorded whenever waste generated from the loading of crude oil and stabilized condensate with a maximum true vapor pressure equal to or greater than 0.50 psia is directed to any of these units. The temperature measurement devices shall reduce the temperature readings to an averaging period of 6 minutes or less and record it at that frequency. The firebox temperature monitors shall be installed, calibrated at least annually and maintained according to the manufacturer's specifications. The temperature monitors shall have an accuracy of the greater of  $\pm 2$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 2.5^{\circ}\text{C}$ . During inerted or non-inerted vessel loading activities of chemicals that require VOC abatement, the average firebox temperature for any of the Marine Vapor Combustion Units in use shall not fall below 1600°F over the entire loading period. Upon completion of the stack tests required under Special Condition No. 20, alternate firebox temperature limits may be requested from the Air Permits Division.

Quality assured (or valid) data must be generated when inerted or non-inerted vessels are being loaded with crude oil and stabilized condensate with a maximum true vapor pressure equal to or greater than 0.50 psia at this barge and ship dock 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 barge and ship loading dock operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

The presence of a pilot flame shall be confirmed by a pilot ultra violet scanner, a thermocouple, a temperature element or an agency approved equivalent measurement device before crude oil and stabilized condensate with a maximum true vapor pressure equal to or greater than 0.50 psia is initiated for loading onto an inerted or non-inerted vessel. If the pilot flame is lost during inerted or non-inerted vessel loading operation, then an orderly system shutdown shall occur. **(10/20)**

25. EPNs MVCU1, MVCU2, and MVCU3 shall each maintain a waste gas destruction efficiency at a minimum of 99.9 percent in their respective fireboxes while crude oil and stabilized condensate with a maximum true vapor pressure equal to or greater than 0.50 psia is loaded into inerted or non-inerted vessels. **(1/19)**
26. The following requirements apply to capture systems for EPNs MVCU1, MVCU2, and MVCU3. **(1/19)**
- A. If used to control pollutants designated as VOC, either:
    - (1) Conduct a once a month visual, audible, and/or olfactory inspection of the capture systems to verify there are no leaking components in the capture system;

or

- (2) Once a year, verify the capture systems are leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background. **(1/19)**

B. The control devices shall not have a bypass.

or

If there is a bypass for any of the control devices, comply with either of the following requirements: **(1/19)**

- (a) Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
- (b) Once a month, inspect the valves, verifying the position of the valves and the condition of the car seals prevent flow out the bypass.

A deviation shall be reported if the monitoring or inspections indicate bypass of the control device.

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.

Date: Draft

**ATTACHMENT A**

Permit Number 6606

Authorized Products, Withdrawal/Filling/Loading Rates, and Throughputs

Emission Point Number	Name	Crude oil and stabilized condensate		Diesel	
		bbl/hr	Mbbl/yr	gal/hr	bbl/yr
28067	Tank 28067	60,000	22,000		
28068	Tank 28068	60,000	22,000		
28069	Tank 28069	60,000	22,000		
28070R	Tank 28070R	60,000	46,000		
28071	Tank 28071	60,000 30,000	22,000		
28072	Tank 28072	60,000	22,000		
28073	Tank 28073	60,000	22,000		
28074	Tank 28074	60,000	22,000		
28075	Tank 28075	60,000	22,000		
28076	Tank 28076	60,000	22,000		
28077	Tank 28077	60,000	22,000		
28080	Tank 28080	60,000	22,000		
28086	Tank 28086	60,000	22,000		
28082	Tank 28082			460	460
28083	Tank 28083			460	460
28087	Tank 28087	60,000	66,000		
28088	Tank 28088	60,000			
28089	Tank 28089	60,000			
28090	Tank 28090	60,000			
DOCK MVCU1 MVCU2 MVCU3	Ship and Barge Loading Dock	60,000	187200		

Hourly rates reflect maximum tank withdrawal/fill rates. In addition to crude oil and stabilized condensate, all tanks authorized for crude oil and stabilized condensate may also store refined fuel products with a vapor pressure less than crude oil and stabilized condensate, such as naphtha, diesel, No. 6 oil, and coker gas oil. NOTE: Mbbl/yr = thousand barrels per year

Date: Draft