

SPECIAL CONDITIONS

Permit Number 2193

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 (ER) limits on that table and other operating conditions specified in this permit.
 - A. Attachment A.1 reflects short-term ER for all units covered by the consolidated permit. Short-term storage tank ERs are based on operation as fixed-roof tanks.
 - B. Attachment A.2 reflects annual allowable emissions for all land-based sources.

FEDERAL PROGRAM APPLICABILITY

2. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated for the following in Title 40 Code of Federal Regulations (40 CFR) Part 60:
 - A. Small Industrial, Commercial and Institutional Steam Generating Units, Subparts A and Dc for Steam Boiler No. 4.
 - B. Storage Vessels for Petroleum Liquids for which Construction, Reconstruction or Modification Commenced after June 11, 1973, and prior to May 19, 1978, Subparts A and K.
 - C. Storage Vessels for Petroleum Liquids for which Construction, Reconstruction or Modification Commenced after May 18, 1978, and prior to July 23, 1984, Subparts A and Ka.
 - D. Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction or Modification Commenced after July 23, 1984, Subparts A and Kb.

A list showing the applicability of New Source Performance Standards (NSPS) Subparts K, Ka, and Kb for all storage tanks authorized in this permit shall be kept at the plant site at the request for review by Texas Commission on Environmental Quality (TCEQ) personnel or any local program with jurisdiction.

3. These facilities shall comply with all applicable requirements of the EPA

SPECIAL CONDITIONS

Permit Number 2193

Page 2

regulations on National Emission Standards for Hazardous Air Pollutants (NESHAPS) in 40 CFR Part 61 promulgated for the following:

- A. Equipment Leaks (Fugitive Emission Sources) of Benzene, Subparts A and J.
 - B. Equipment Leaks (Fugitive Emission Sources), Subparts A and V.
 - C. Benzene Emissions from Benzene Storage Vessels, Subparts A and Y.
 - D. Benzene Emissions from Benzene Transfer Operations, Subparts A and BB.
4. These facilities shall comply with all applicable requirements of Title 30 Texas Administrative Code (30 TAC) §§ 113.230 and 113.300, including the referenced requirements contained in 40 CFR Part 63, Subparts R and Y.

OPERATIONAL LIMITS AND WORK PRACTICES

5. Steam Boiler No. 4 shall only fire pipeline quality sweet natural gas as defined in the TCEQ rules. Its fired duty is limited to 15 MMBtu per hour. Authorization for another fuel can only be achieved through a permit by rule claim or permit amendment.
6. The facility is authorized to store and load compounds according to the scenarios and controls described in Attachment B. Storage and loading of any other compound, except those described in Special Condition Nos. 16 and 17 of this permit, is prohibited without prior approval from the Executive Director of the TCEQ. **(12/06)**
7. A product currently authorized to be stored in a fixed-roof tank may also be stored in a tank equipped with an internal floating roof (IFR). Any chemical may be stored in tanks smaller than those granted in the permit scenario. This would enable a direct one-to-one substitution of a smaller tank for a larger tank.

In addition, this facility is authorized to store compounds in any 100,000-barrel storage tank as a direct substitution for an 80,000-barrel tank and a 25,000-barrel tank.

8. Sasol crude acid and cresylic acid are not authorized for storage in IFR Tank 25-30 **(12/06)**
9. The two flare systems shall be designed and operated such that the combined assist natural gas and waste stream to each flare meets the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal

SPECIAL CONDITIONS

Permit Number 2193

Page 3

flow conditions. The heating value and velocity requirements shall be satisfied during operations authorized by this permit.

Each flare shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flame shall be continuously monitored by a thermocouple or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.

Each 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.

10. Emissions from barge and ship loading operations shall be minimized by the use of a vapor collection system when loading all compounds which require vapor control under permitted conditions. The vapor collection system shall be operated and maintained at less than atmospheric conditions at the facility vapor collection point when authorized by USCG Regulations. Negative pressures are prohibited by this regulation during the loading of inerted vessels. All inerted U.S. flag vessels shall be certified leak-tight prior to loading as specified in 40 CFR Part 61 (NESHAPS BB). If negative pressure loading is possible under USCG regulations, the system pressure shall be monitored and recorded. A pressure and/or vacuum gauge shall be installed to verify a negative pressure of at least a one-inch water column except during periods of time associated with start-ups and shutdowns. The two periods shall not exceed 10 percent of the total loading cycle time or 30 minutes per period, whichever is greater. If the vacuum system should fail, the operator has one hour to correct the problem and restore the vacuum. Loading operations shall cease if the vacuum is not restored within one hour of failure. Records shall be kept of the system pressure monitored and of all shore side vacuum system repairs in accordance with this special condition. **(12/06)**
11. Audio, olfactory, and visual checks shall be made of quick connect joints, fittings, and hoses in VOC service during all transfer operations. Repair of the leaking component shall be performed immediately upon detection of a leak. Loading operations shall cease if repair cannot be accomplished during operation. Records shall be kept of all leaks detected during product transfer operations and subsequent repairs performed in accordance with this special condition.
12. Each of the following compounds (storage scenarios shown in Attachment B.3) must be respectively maintained at or below its indicated maximum temperature:

SPECIAL CONDITIONS

Permit Number 2193

Page 4

CAS No.	Chemical Name	Control Temperature (°F)	Tank Type
75-56-9	1,2 Propylene Oxide	55.0	IFR
	Rubber Solvent	70.0	IFR
	Aviation Fuel (100 Octane)	70.0	IFR

If a product is delivered to the facility at a temperature exceeding the represented reduced temperature, the permit holder will have 72 hours to lower the product temperature. As long as the tank is under refrigeration during this 72-hour period, it will be considered to be in compliance with the requirements in this paragraph. Records shall be kept of product delivery temperatures and the time taken to reduce the temperature to the required level for all compounds referenced in this special condition. Daily temperature readings shall be performed and recorded for all tanks storing compounds requiring temperature control per this special condition. **(12/06)**

13. All tank trucks to be loaded at this facility that are subject to loading controls as required in Attachment B.2 of this permit must have passed a leak-tightness test within the past 12 months using the methods described in NSPS, Subpart XX. Each tank truck shall display or carry identification which:

- A. Shows the date the tank truck last passed the leak-tightness test required by this special condition, and
- B. Shows the identification number of the tank truck.

The vehicle identification number of each tank truck loaded at this facility shall be recorded as well as the date the tank truck last passed the annual leak-tightness test per this special condition.

14. The holder of this permit shall not allow a railcar to be filled unless the railcar being filled has passed a leak-tight test designated under 40 CFR § 63.126(e). Railcar tank-tightness checking shall be conducted in accordance with this applicable subpart.

STORAGE TANK SPECIFICATIONS

15. These conditions shall not apply (1) where the VOC has an aggregate partial pressure of less than 0.5 pound per square inch absolute (psia) at the maximum expected operating temperature or (2) to storage tanks smaller than 25,000 gallons. **(12/06)**

SPECIAL CONDITIONS

Permit Number 2193

Page 5

- A. An IFR or equivalent control shall be installed on all tanks.
- B. Any IFRs that are installed in fixed-roof tanks shall be equipped with either a mechanical shoe, a liquid-mounted, or a vapor-mounted primary seal. If a vapor-mounted primary seal is used, the tank must also be equipped with a rim-mounted secondary seal.
- C. An open-top tank containing a floating roof which uses double seal or secondary seal technology shall be an approved control alternative to an IFR tank provided the primary seal consists of either a mechanical shoe seal or a liquid-mounted seal, and the secondary seal is rim-mounted. A weathershield is not approvable as a secondary seal unless specifically reviewed and determined to be vapor-tight.
- D. For any tank equipped with a floating roof, the integrity of the floating roof seals shall be verified annually.
- E. The floating roof design shall incorporate sufficient flotation to conform to the requirements of American Petroleum Institute (API) Code 650, Appendix C and Appendix H or an equivalent degree of flotation, except that an internal floating cover need not be designed to meet rainfall support requirements.
- F. Uninsulated tank exterior surfaces exposed to the sun shall be white.
- G. Records shall be kept of the annual IFR seal inspections performed in accordance with paragraph E of this special condition including date of inspection, seal integrity, and corrective actions taken.

CHEMICAL HANDLING FLEXIBILITY

- 16. Compounds other than those listed in Attachment B may be added to this list by the procedure described below, provided that no physical modification or new construction requiring permitting authorization pertains to these additions. **(12/06)**
 - A. The replacement material emissions shall be emitted from the established emission points as identified on the maximum allowable emission rates table (MAERT) and shall not cause the rates specified on the MAERT to be exceeded.
 - B. The Effects Screening Level (ESL) for any replacement constituent (compound or chemical) shall not be less than the ESL value for the current

constituent; and the ER for the replacement material shall not be greater than the ER for the current material except if the following condition is met:

where: there is a direct substitution of one constituent for another

$$(ER2)/(ESL2) \text{ less than or equal to } (ER1)/(ESL1)$$

OR

where: the replacement has different constituents

$$\frac{(ER2a) + (ER2b) + (ER2n..)}{(ESL2a) (ESL2b) (ESL2n..)} \text{ less than or equal to } \frac{(ER1a)}{(ESL1a)}$$

where: ER1 is the authorized ER of each of the constituents in the current material;

ER2 is the ER of each of the constituents in the replacement material;

ESL1 is the ESL for each of the constituents in the current material; and

ESL2 is the ESL for each of the constituents in the replacement material.

The ESL shall be taken from the permit application or the current TCEQ ESL list. If a constituent is not represented in the permit application and is not listed in the current TCEQ ESL list, the ESL may be obtained in writing from the TCEQ Toxicology Section.

- C. Records shall be maintained at the plant site or at the Regional EHS Department to demonstrate compliance with prior paragraphs of this special condition on a two-year rolling retention basis and be made immediately available at the request of personnel from the TCEQ:

- (1) Throughput and days of operations shall be kept on a monthly basis.
- (2) Material Safety Data Sheets or similar documentation for all materials shall be kept for all chemicals handled within the past 24-months.
- (3) Sufficient throughput records shall be maintained on a monthly basis to demonstrate compliance with volatile organic compounds (VOC) emission limits of 30 TAC Chapter 115.

SPECIAL CONDITIONS

Permit Number 2193

Page 7

- (4) Records, including calculations, for all material (chemical) changes that are implemented under this special condition shall be kept for on a rolling 24-month basis.

Any compound name that is not listed on the approved chemical list shall be authorized for storage and loading if its Chemical Abstract Service Number (CAS) matches that of a compound already listed in Attachment B. A revised Table 7 shall be kept at the plant site for review by TCEQ personnel and any local program with jurisdiction and the Table 7 shall be placed in a notebook within ten days of any change in service of these tanks.

17. Permits by rule shall not be used at the permitted facility for the authorization of additional storage and loading activity or capacity. Provided all other requirements of 30 TAC Chapter 106 are satisfied, this restriction does not apply to the following circumstances: **(3/07)**
 - A. Construction of new storage tanks or loading facilities, or additional throughput at existing storage tanks or loading facilities, in service only for compounds with vapor pressures less than 0.5 psia.
 - B. Construction of new storage tanks, or additional throughput at existing storage tanks, from which all emissions during the tank roof "off-float" period (i.e., roof landed to roof refloated) are routed to a vapor recovery and abatement system that provides a DRE of at least 98 wt.-%.
 - C. Construction of new loading facilities, or additional throughput at existing loading facilities, routed to a vapor recovery and abatement system that provides a DRE of at least 98 wt.-%.
 - D. Activities unrelated to, and that do not otherwise affect emissions from, storage tank and loading operations.

TANK ROOF LANDING OPERATIONS **(12/06)**

18. The number of tank roof landings at the permitted facility is limited such that total emissions attributable to tank operations (standing idle emissions after landing, re-filling emissions after landings, de-gassing emissions, routine withdrawal emissions, and routine storage emissions) comply with applicable emission rate limits specified in Special Condition No. 1 of this permit and the maximum allowable emission rate table, Attachments A.1 and A.2.

This permit authorizes tank roof landing emissions attributable to:

A. The planned maintenance events and routine product changes respectively represented in Section 5.1.3 (Predictable Maintenance_Events) and Section 5.1.4 (Product Changes) of the amendment application received March 1, 2006.

B. The controlled "convenience" landings represented in Section 1.1 (Application Objectives) and Section 4.1 (Storage Tanks) of the amendment application received April 6, 2007.

Tank roof landing emissions attributable to the planned maintenance events represented in Section 5.1.3 (Predictable Maintenance Events) of the amendment application received March 1, 2006, are no longer "affirmative defense"-eligible, and shall be quantified and represented in the permit's MAERT by January 5, 2010.

Landing events during emergency situations shall be evaluated and managed in accordance with 30 TAC Chapter 101, Subchapter F.

19. The permit holder shall, within 72 hours after landing a tank roof, either (1) re-float the landed roof, or (2) begin the process to empty, degas, and rinse the tank. De-gassing and convenience landing emissions shall be routed to a control device that provides a DRE of no less than 98 wt.-%.

These requirements do not apply to storage tanks which contain products with a true vapor pressure of less than 0.5 psia, to new tanks at initial fill, or to cleaned tanks being refilled.

A tank roof may be landed without controls only under the following circumstances:

- A. "Convenience" landings required by a customer's termination of the use of the tank.
- B. Product changes (i.e. product different from the previously stored product) as defined by a different CAS number and/or product specifications (e.g., Reid vapor pressure, etc.), and as represented in Section 5.1.4 (Product Changes) of the amendment application received March 1, 2006.
- C. The planned maintenance events represented in Section 5.1.3 (Predictable Maintenance Events) of the amendment application received March 1, 2006.

The process of emptying and re-filling shall be continuous and as rapid as possible.

20. Off-property ground level concentrations of emissions attributable to re-filling tanks with products of true vapor pressure greater than 0.5 psia shall not exceed the concentrations indicated by the site-specific dispersion modeling analysis submitted in support of this permit's amendment application received March 1, 2006.

Compliance with this requirement shall be demonstrated by either of the following options:

- A. Maximum Combined Re-filling Rate (bbl/hr): The maximum combined re-filling rate (bbl/hr) for all landed tanks containing products with a true vapor pressure greater than 0.5 psia shall be based on the following formula as determined by site-specific dispersion modeling:

$$FR_p = \frac{2.2 \text{ bbl/hr.}}{\text{ug/m}^3} \times ESL_p$$

where: FR_p = Re-fill rate of product (barrels per hour (bbl/hr))

ESL_p = Hourly effects screening level of product being re-filled (ug/m³)

- B. Maximum Combined Re-filling Emission Rate (lb/hr): The maximum combined re-filling emission rate (lb/hr) for all landed tanks containing products with a true vapor pressure greater than 0.5 psia shall be based on the following formula as determined by site-specific dispersion modeling:

$$ER_p = \frac{0.26 \text{ lb/hr.}}{\text{ug/m}^3} \times ESL_p$$

where: ER_p = Re-fill emission rate of product (pounds per hour (lb/hr))

ESL_p = Hourly effects screening level of product being re-filled (ug/m³)

21. Emissions resulting from degassing/cleaning/rinsing operations shall be routed to a combustion device which satisfies VOC control requirements of 30 TAC Chapter 115, Subchapter F, Division 3 relating to Degassing or Cleaning of Stationary,

Marine, and Transport Vessels (e.g., internal combustion engine).

22. New and modified VOC storage tanks shall require controls consistent with the Tier III BACT analysis submitted in support of this permit's amendment application received March 1, 2006.

PROCESS FUGITIVE LEAK DETECTION

23. Piping, Valves, Flanges, Connectors, Pumps, and Compressors in VOC Service - 28VHP

- A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 psia at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 pound per square inch) below ambient pressure. Equipment excluded from this condition shall be identified in a list to be made available upon request.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute, API, American Society of Mechanical Engineers, or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves, as defined by 30 TAC Chapter 115, shall be identified in a list to be made available upon request.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically-tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be

closed.

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

An approved gas analyzer shall conform to requirements listed in 40 CFR § 60.485(a) - (b).

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

- G. Except as may be provided for in the special conditions of this permit, all pump and compressor seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent 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 and compressor seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired.
- I. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed

SPECIAL CONDITIONS

Permit Number 2193

Page 12

until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. At the discretion of the TCEQ Executive Director or designated representative, early unit shutdown or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.

- J. The results of the required fugitive instrument monitoring and maintenance program shall be made available to the TCEQ Executive Director or designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of physical inspections are not required unless a leak is detected.
- K. Alternative monitoring frequency schedules of 30 TAC §§ 115.352 - 115.359 or National Emission Standards for Organic Hazardous Air Pollutants, 40 CFR Part 63, Subpart H, may be used in lieu of Items F through G of this condition.
- L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable NSPS, or an applicable NESHAPS and does not constitute approval of alternative standards for these regulations.

24. The requirements of Special Condition No. 23 are modified as follows: **(12/06)**

- A. Dry break hose connections are exempt from the requirement in Special Condition No. 23E to be welded or flanged.
- B. Damaged or leaking pump and compressor seals found to be emitting VOC in excess of 500 ppmv (in lieu of the 2,000 ppmv leak definition specified in Special Condition No. 23H or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired in accordance with Special Condition No. 23I.

RECORDKEEPING REQUIREMENTS AND CALCULATION METHODS

25. The permit holder shall maintain at the plant site records containing the following information:

SPECIAL CONDITIONS

Permit Number 2193

Page 13

- A. Daily and annual tank throughputs for each compound shall be recorded for every tank affected by this permit.
 - B. Daily and annual truck, railcar, barge and ship loading throughputs for each compound.
 - C. Any tank filling, tank withdrawal, or loading operations that are performed under reduced hourly rates per Attachment B shall be recorded at the time they occur. For truck and railcar loading, a reduced rate is that which is permitted below 1,400 gallons per minute. For barge and ship loading, a reduced rate is that which is permitted below 5,000 barrels per hour (bbl/hr) and 15,000 bbl/hr, respectively. These records shall reflect the date and the actual rate of the filling, withdrawing, and/or loading operation of the specific compound. Also, the records shall show how the reduced rate was attained, i.e., restrictive orifice, design capacity of pump, etc.
26. Facility-wide land-based emissions shall be calculated monthly, to include routine and tank roof landing/re-filling emissions from storage tanks (i.e, standing idle emissions after landings, re-filling emissions after landings, de-gassing emissions, routine withdrawal emissions, routine storage emissions, and planned maintenance events), all land-based loading emissions, flare emissions, and fugitive emissions. Total annual land-based emissions shall be kept on a rolling 12-month basis.

The records shall include tank or loading point identification number, control method used, tank, or vessel capacity in gallons or barrels, 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, VOC throughput in gallons or barrels for the previous month and previous rolling 12 month period.

The records shall also include the current number of roof landing events, duration of the off-float period of each landing event, initiation and duration of de-gassing operations as applicable, and total tons of emissions for the previous month and year-to-date (i.e., previous rolling 12-month period). **(12/06)**

Emissions for tanks and loading operations shall be calculated using: (a) the January 1995 edition of AP-42, "Compilation of Air Pollutant Emission Factors," for annual loading emissions; (b) the TCEQ publication (February 2001) titled "Technical Guidance Package for Chemical Sources - Storage Tanks." **(12/06)**

Emissions associated with roof landings shall be calculated using the methods described in American Petroleum Institute's Final Report titled "Evaporative Loss

from Storage Tank Floating Roof Landings" (April 2005 or subsequent revisions).
(12/06)

27. All records required in the special conditions of this permit and any additional as required by 30 TAC § 116.115(b)(2)(E) shall be recorded and maintained by the permit holder at the plant site for a period of at least two years. These records shall be made readily available to the TCEQ personnel upon request or any local air pollution control program having jurisdiction. **(12/06)**
28. This permitted facility is not authorized to emit more than ten tons per year of highly reactive VOC (HRVOC) compounds. An HRVOC compound is defined in 30 TAC § 115.10.

Dated December 12, 2006