

# FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO  
Arkema Inc.

AUTHORIZING THE OPERATION OF  
Beaumont Facility  
Beaumont Facility Chemical Manufacturing  
Industrial Organic Chemicals

LOCATED AT  
Jefferson County, Texas  
Latitude 30° 3' 29" Longitude 94° 3' 25"  
Regulated Entity Number: RN100216373

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No:   01636   Issuance Date: \_\_\_\_\_

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For the Commission

## Table of Contents

<b>Section</b>	<b>Page</b>
General Terms and Conditions .....	1
Special Terms and Conditions .....	1
Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting .....	1
Additional Monitoring Requirements .....	10
New Source Review Authorization Requirements .....	11
Compliance Requirements .....	12
Risk Management Plan .....	14
Protection of Stratospheric Ozone .....	14
Permit Location .....	14
Permit Shield (30 TAC § 122.148) .....	14
Attachments .....	16
Applicable Requirements Summary .....	17
Additional Monitoring Requirements .....	55
Permit Shield .....	66
New Source Review Authorization References .....	79
Appendix A .....	86
Acronym List .....	87
Appendix B .....	88

## **General Terms and Conditions**

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

## **Special Terms and Conditions: Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting**

1. Permit holder shall comply with the following requirements:
  - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
  - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

- C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
  - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
  - E. Emission units subject to 40 CFR Part 63, Subparts ZZZZ and VVVVVV as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.1090 and 113.1495 which incorporates the 40 CFR Part 63 Subpart by reference.
2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
- A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
  - B. Title 30 TAC § 101.3 (relating to Circumvention)
  - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
  - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
  - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
  - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
  - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
  - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
  - I. Title 30 TAC § 101.222 (relating to Demonstrations)
  - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

- A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:
- (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
  - (ii) Title 30 TAC § 111.111(a)(1)(E)
  - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
  - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO<sub>x</sub>, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the “Applicable Requirements Summary” attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:
    - (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
    - (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.

- (3) Records of all observations shall be maintained.
- (4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
- (5) Compliance Certification:
  - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).
  - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation

on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)
- (iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO<sub>x</sub>, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
  - (1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.
  - (2) Records of all observations shall be maintained.
  - (3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions

outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A)
- (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader

- C. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
- D. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:

- (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
  - (ii) Sources with an effective stack height ( $h_e$ ) less than the standard effective stack height ( $H_e$ ), must reduce the allowable emission level by multiplying it by  $[h_e/H_e]^2$  as required in 30 TAC § 111.151(b)
  - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)
- 4. For storage vessels maintaining working pressure as specified in 30 TAC Chapter 115, Subchapter B, Division 1: “Storage of Volatile Organic Compounds,” the permit holder shall comply with the requirements of 30 TAC § 115.112(a)(1).
- 5. For industrial wastewater specified in 30 TAC Chapter 115, Subchapter B, the permit holder shall comply with the following requirements for wastewater drains, junction boxes, lift stations and weirs:
  - A. Title 30 TAC § 115.142 (relating to Control Requirements)
  - B. Title 30 TAC § 115.142(1)(A) - (D) (relating to Control Requirements)
  - C. Title 30 TAC § 115.142(1)(E) and (F) (relating to Control Requirements)
  - D. Title 30 TAC § 115.145 (relating to Approved Test Methods)
  - E. Title 30 TAC § 115.146 (relating to Recordkeeping Requirements)
  - F. Title 30 TAC § 115.148 (relating to Determination of Wastewater Characteristics)
- 6. The permit holder shall comply with the following requirements of 30 TAC Chapter 115, Subchapter F, Division 3, Degassing of Storage Tanks, Transport Vessels and Marine Vessels:
  - A. For the degassing of all transport vessels with a nominal capacity of 8,000 gallons or more, the permit holder shall comply with the following requirements:
    - (i) Title 30 TAC § 115.541(a) - (c) and (d) (relating to Emission Specifications)
    - (ii) Title 30 TAC § 115.542(a) and (a)(1), (a)(2), (a)(3) or (a)(4) (relating to Control Requirements). Where the requirements of 30 TAC Chapter 115, Subchapter F contain multiple compliance options, the permit holder shall keep records of when each compliance option was used.

- (iii) Title 30 TAC § 115.542(b), (c) and (e) (relating to Control Requirements)
- (iv) Title 30 TAC § 115.543 (relating to Alternate Control Requirements)
- (v) Title 30 TAC § 115.544(a)(1) and (a)(2) (relating to Inspection, Monitoring, and Testing Requirements), for inspections
- (vi) Title 30 TAC § 115.544(b) (relating to Inspection, Monitoring, and Testing Requirements), for monitoring
- (vii) Title 30 TAC § 115.544(b)(1) and (b)(2) (relating to Inspection, Monitoring, and Testing Requirements), for monitoring of control devices
- (viii) Title 30 TAC § 115.544(b)(2)(A) - (J) (relating to Inspection, Monitoring, and Testing Requirements), for monitoring (as appropriate to the control device)
- (ix) Title 30 TAC § 115.544(b)(3), (b)(4) and (b)(6) (relating to Inspection, Monitoring, and Testing Requirements), for VOC concentration or lower explosive limit threshold monitoring
- (x) Title 30 TAC § 115.544(c), and (c)(1) - (c)(3) (relating to Inspection, Monitoring, and Testing Requirements), for testing of control devices used to comply with 30 TAC § 115.542(a)(1)
- (xi) Title 30 TAC § 115.545(1) - (11) and (13) (relating to Approved Test Methods)
- (xii) Title 30 TAC § 115.546(a), (a)(1) and (a)(3) (relating to Recordkeeping and Notification Requirements), for recordkeeping
- (xiii) Title 30 TAC § 115.546(a)(2) and (a)(2)(A) - (J) (relating to Recordkeeping and Notification Requirements), for recordkeeping (as appropriate to the control device)
- (xiv) Title 30 TAC § 115.546(a)(4) (relating to Recordkeeping and Notification Requirements), for recordkeeping of testing of control devices used to comply with 30 TAC § 115.542(a)(1)

7. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:

- A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)
- B. Title 40 CFR § 60.8 (relating to Performance Tests)

- C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)
  - D. Title 40 CFR § 60.12 (relating to Circumvention)
  - E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
  - F. Title 40 CFR § 60.14 (relating to Modification)
  - G. Title 40 CFR § 60.15 (relating to Reconstruction)
  - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)
8. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 61, unless otherwise stated in the applicable subpart:
- A. Title 40 CFR § 61.05 (relating to Prohibited Activities)
  - B. Title 40 CFR § 61.07 (relating to Application for Approval of Construction or Modification)
  - C. Title 40 CFR § 61.09 (relating to Notification of Start-up)
  - D. Title 40 CFR § 61.10 (relating to Source Reporting and Request Waiver)
  - E. Title 40 CFR § 61.12 (relating to Compliance with Standards and Maintenance Requirements)
  - F. Title 40 CFR § 61.13 (relating to Emissions Tests and Waiver of Emission Tests)
  - G. Title 40 CFR § 61.14 (relating to Monitoring Requirements)
  - H. Title 40 CFR § 61.15 (relating to Modification)
  - I. Title 40 CFR § 61.19 (relating to Circumvention)
9. For facilities where total annual benzene quantity from waste is less than 1 megagram per year and subject to emission standards in 40 CFR Part 61, Subpart FF, the permit holder shall comply with the following requirements:
- A. Title 40 CFR § 61.355(a)(1)(iii), (a)(2), (a)(5)(i) - (ii), (a)(6), (b), and (c)(1) - (3) (relating to Test Methods, Procedures, and Compliance Provisions), for calculation procedures
  - B. Title 40 CFR § 61.356(a) (relating to Recordkeeping Requirements)

- C. Title 40 CFR § 61.356(b), and (b)(1) (relating to Recordkeeping Requirements)
  - D. Title 40 CFR § 61.357(a), and (b) (relating to Reporting Requirements)
10. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.
  11. Use of isobutylene as a photoionization detector (PID) calibration gas for performance of Method 21 leak detection and reporting activities for instances when the primary VOC is carbon disulfide (CS<sub>2</sub>) has been approved by the TCEQ.

### **Additional Monitoring Requirements**

12. Unless otherwise specified, the permit holder shall comply with the compliance assurance monitoring requirements as specified in the attached “CAM Summary” upon issuance of the permit. In addition, the permit holder shall comply with the following:
  - A. The permit holder shall comply with the terms and conditions contained in 30 TAC § 122.147 (General Terms and Conditions for Compliance Assurance Monitoring).
  - B. The permit holder shall report, consistent with the averaging time identified in the “CAM Summary,” deviations as defined by the deviation limit in the “CAM Summary.” Any monitoring data below a minimum limit or above a maximum limit, that is collected in accordance with the requirements specified in 40 CFR § 64.7(c), shall be reported as a deviation. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).
  - C. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time specified in the “CAM Summary,” for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances in order to avoid reporting deviations. All monitoring data shall be collected in accordance with the requirements specified in 40 CFR § 64.7(c).
  - D. The permit holder shall operate the monitoring, identified in the attached “CAM Summary,” in accordance with the provisions of 40 CFR § 64.7.
  - E. The permit holder shall comply with either of the following requirements for any capture system associated with the VOC control device subject to CAM. If the results of the following inspections indicate that the capture

system is not working properly, the permit holder shall promptly take necessary corrective actions:

- (i) Once a year the permit holder shall inspect the capture system in compliance of CAM for leaks 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 ppm above background or as defined by the underlying applicable requirement; or
- (ii) Once a month, the permit holder shall conduct a visual, audible, and/or olfactory inspection of the capture system in compliance of CAM to detect leaking components.

F. The permit holder shall comply with the requirements of 40 CFR § 70.6(a)(3)(ii)(A) and 30 TAC § 122.144(1)(A)-(F) for documentation of all required inspections.

13. The permit holder shall comply with the periodic monitoring requirements as specified in the attached “Periodic Monitoring Summary” upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time specified in the “Periodic Monitoring Summary,” for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

### **New Source Review Authorization Requirements**

14. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
- A. Are incorporated by reference into this permit as applicable requirements
  - B. Shall be located with this operating permit
  - C. Are not eligible for a permit shield

15. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
16. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

### **Compliance Requirements**

17. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.
18. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:
  - A. The permit holder shall comply with the compliance schedules and submit written notification to the TCEQ Executive Director as required in 30 TAC Chapter 117, Subchapter H, Division 1:
    - (i) For sources in the Beaumont-Port Arthur Nonattainment area, 30 TAC § 117.9000
19. Use of Emission Credits to comply with applicable requirements:
  - A. Unless otherwise prohibited, the permit holder may use emission credits to comply with the following applicable requirements listed elsewhere in this permit:
    - (i) Title 30 TAC Chapter 115
    - (ii) Title 30 TAC Chapter 117

(iii) Offsets for Title 30 TAC Chapter 116

B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:

- (i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)(2)
- (ii) The emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 1
- (iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)(2)
- (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122
- (v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)

20. Use of Discrete Emission Credits to comply with the applicable requirements:

A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:

- (i) Title 30 TAC Chapter 115
- (ii) Title 30 TAC Chapter 117
- (iii) If applicable, offsets for Title 30 TAC Chapter 116
- (iv) Temporarily exceed state NSR permit allowables

B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:

- (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
- (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
- (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)

- (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122
- (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

### **Risk Management Plan**

- 21. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

### **Protection of Stratospheric Ozone**

- 22. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone:
  - A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.

### **Permit Location**

- 23. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

### **Permit Shield (30 TAC § 122.148)**

- 24. A permit shield is granted for the emission units, groups, or processes specified in the attached “Permit Shield.” Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment “Permit Shield.” Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit

revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

## **Attachments**

**Applicable Requirements Summary**

**Additional Monitoring Requirements**

**Permit Shield**

**New Source Review Authorization References**

### **Applicable Requirements Summary**

**Unit Summary ..... 18**

**Applicable Requirements Summary ..... 28**

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
D226	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	<p>VOC Concentration = VOC concentration is greater than or equal to 612 ppmv., Control Device Type = Smokeless flare, Total Design Capacity = Total design capacity is greater than or equal to 1,100 tons per year for all chemicals produced within that unit., Flow Rate or VOC Concentration = Flow rate is greater than or equal to 0.011 scm/min or the VOC concentration is greater than or equal to 500 ppmv., 40 CFR 60 Subpart NNN Requirements = The distillation unit vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart NNN: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices., 40 CFR 60 Subpart RRR Requirements = The reactor process vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart RRR: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without</p>

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					<p>the use of VOC emission control devices., Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2., Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for that source.</p>
D226	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R-5121-2	30 TAC Chapter 115, Vent Gas Controls	Control Device Type = Direct flame incinerator in which the vent gas stream is burned at a temperature or at least 1300° F (704 C).
D226	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-3	30 TAC Chapter 115, Vent Gas Controls	VOC Concentration = VOC concentration is greater than or equal to 612 ppmv., Control Device Type = Vapor recovery system, as defined in 30 TAC § 115.10, other than an afterburner, blast furnace combustion device, boiler,

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					<p>catalytic or direct flame incinerator, carbon adsorption system, chiller, flare or vapor combustor., Total Design Capacity = Total design capacity is greater than or equal to 1,100 tons per year for all chemicals produced within that unit., Flow Rate or VOC Concentration = Flow rate is greater than or equal to 0.011 scm/min or the VOC concentration is greater than or equal to 500 ppmv., 40 CFR 60 Subpart NNN Requirements = The distillation unit vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart NNN: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices., 40 CFR 60 Subpart RRR Requirements = The reactor process vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart RRR: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control</p>

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					<p>devices., Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2., Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for that source.</p>
D3023	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	<p>VOC Concentration = VOC concentration is greater than or equal to 612 ppmv., Control Device Type = Smokeless flare, Total Design Capacity = Total design capacity is greater than or equal to 1,100 tons per year for all chemicals produced within that unit., Flow Rate or VOC Concentration = Flow rate is greater than or equal to 0.011 scm/min or the VOC concentration is greater than or equal to 500 ppmv., 40 CFR 60 Subpart NNN Requirements =</p>

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					<p>The distillation unit vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart NNN: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices., 40 CFR 60 Subpart RRR            Requirements = The reactor process vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart RRR: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices., Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2., Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission</p>

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					specification, or exemption for that source.
D3023	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R-5121-2	30 TAC Chapter 115, Vent Gas Controls	Control Device Type = Direct flame incinerator in which the vent gas stream is burned at a temperature or at least 1300° F (704 C).
D3023	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-3	30 TAC Chapter 115, Vent Gas Controls	VOC Concentration = VOC concentration is greater than or equal to 612 ppmv., Control Device Type = Vapor recovery system, as defined in 30 TAC § 115.10, other than an afterburner, blast furnace combustion device, boiler, catalytic or direct flame incinerator, carbon adsorption system, chiller, flare or vapor combustor., Total Design Capacity = Total design capacity is greater than or equal to 1,100 tons per year for all chemicals produced within that unit., Flow Rate or VOC Concentration = Flow rate is greater than or equal to 0.011 scm/min or the VOC concentration is greater than or equal to 500 ppmv., 40 CFR 60 Subpart NNN Requirements = The distillation unit vent gas

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					<p>stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart NNN: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices., 40 CFR 60 Subpart RRR            Requirements = The reactor process vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart RRR: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices., Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2., Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for</p>

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					that source.
D310	STORAGE TANKS/VESSELS	N/A	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
D310	STORAGE TANKS/VESSELS	N/A	60Kb	40 CFR Part 60, Subpart Kb	No changing attributes.
D9867	STORAGE TANKS/VESSELS	N/A	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
D9868	STORAGE TANKS/VESSELS	N/A	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
FLARE	FLARES	N/A	R-1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
GRP-EFR	STORAGE TANKS/VESSELS	D2307, D307	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
GRP-EFR	STORAGE TANKS/VESSELS	D2307, D307	60KB	40 CFR Part 60, Subpart Kb	No changing attributes.
GRP-FUG1	FUGITIVE EMISSION UNITS	ACRO-FUG, ACROTK-FUG, BMT-2M, DMS, F- 1, FLAREFUG, FUGINCIN, MMP- FUG, MMPRC- FUG, MMPTKS- FUG, PR-TOWER, RCSHIP, RUNDOWN, STORAGE, SWS, TO-FUG, TTSHIP,	R5352	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	No changing attributes.

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
		WWTANKFUG			
GRP-FUG1	FUGITIVE EMISSION UNITS	ACRO-FUG, ACROTK-FUG, BMT-2M, DMS, F- 1, FLAREFUG, FUGINCIN, MMP- FUG, MMPRC- FUG, MMPTKS- FUG, PR-TOWER, RCSHIP, RUNDOWN, STORAGE, SWS, TO-FUG, TTSHIP, WWTANKFUG	60VV-01	40 CFR Part 60, Subpart VV	No changing attributes.
GRP-FUG3	FUGITIVE EMISSION UNITS	BMT-1E/T, BMT- 1M	R5352	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	No changing attributes.
GRP-FUG3	FUGITIVE EMISSION UNITS	BMT-1E/T, BMT- 1M	60VV-03	40 CFR Part 60, Subpart VV	No changing attributes.
GRP-FUG3	FUGITIVE EMISSION UNITS	BMT-1E/T, BMT- 1M	60VVa	40 CFR Part 60, Subpart VVa	No changing attributes.
GRP-FWPUMP	SRIC ENGINES	P-217, P-3192A, P- 3192B	63ZZZZ-01	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-GEN1	SRIC ENGINES	GENERATOR 1, GENERATOR 2	60III-02	40 CFR Part 60, Subpart III	No changing attributes.
GRP-GEN1	SRIC ENGINES	GENERATOR 1, GENERATOR 2	63ZZZZ-02	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-GEN2	SRIC ENGINES	GENERATOR 3,	60III-03	40 CFR Part 60, Subpart	No changing attributes.

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
		GENERATOR 4		III	
GRP-GEN2	SRIC ENGINES	GENERATOR 3, GENERATOR 4	63ZZZZ-03	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-HFR	STORAGE TANKS/VESSELS	D8501A, D8501B, D8501C	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
GRP-HFR	STORAGE TANKS/VESSELS	D8501A, D8501B, D8501C	60Kb	40 CFR Part 60, Subpart Kb	No changing attributes.
GRP-LOAD	LOADING/UNLOADING OPERATIONS	METH RAIL, RAIL LOAD, TRUCK LOAD	R-5211	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
PAINT-1	SURFACE COATING OPERATIONS	N/A	R5421	30 TAC Chapter 115, Surface Coating Operations	No changing attributes.
REACT ACRO	REACTOR	N/A	60III	40 CFR Part 60, Subpart III	No changing attributes.
REACT ACRO	REACTOR	N/A	63VVVVV	40 CFR Part 63, Subpart VVVVV	No changing attributes.
SULFOX-TO	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Dc	40 CFR Part 60, Subpart Dc	No changing attributes.

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
D226	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(2) § 115.121(a)(2) § 115.122(a)(2)(A) § 60.18	Vent gas affected by §115.121(a)(2) must be controlled properly with a control efficiency > 98% or to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O2 for combustion devices).	[G]§ 115.125 § 115.126(1) § 115.126(1)(B) § 115.126(2) § 115.126(7) ** See CAM Summary	§ 115.126 § 115.126(1) § 115.126(1)(B) § 115.126(2)	None
D226	EP	R-5121-2	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(2) § 115.121(a)(2) § 115.122(a)(2)(B)	Vent gas affected by §115.121(a)(2) must be controlled properly with a control efficiency > 98% or to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O2 for combustion devices).	[G]§ 115.125 § 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(i) § 115.126(2) ** See CAM Summary	§ 115.126 § 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(i) § 115.126(2)	None
D226	EP	R5121-3	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(2) § 115.121(a)(2) § 115.122(a)(2)(B)	Vent gas affected by §115.121(a)(2) must be controlled properly with a control efficiency > 98% or to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O2 for combustion devices).	[G]§ 115.125 § 115.126(1) § 115.126(1)(C) § 115.126(2) ** See CAM Summary	§ 115.126 § 115.126(1) § 115.126(1)(C) § 115.126(2)	None
D3023	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(2) § 115.121(a)(2) § 115.122(a)(2)(A) § 60.18	Vent gas affected by §115.121(a)(2) must be controlled properly with a control efficiency > 98% or to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O2 for combustion devices).	[G]§ 115.125 § 115.126(1) § 115.126(1)(B) § 115.126(2) § 115.126(7) ** See CAM Summary	§ 115.126 § 115.126(1) § 115.126(1)(B) § 115.126(2)	None
D3023	EP	R-5121-2	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(2) § 115.121(a)(2) § 115.122(a)(2)(B)	Vent gas affected by §115.121(a)(2) must be controlled properly with a control efficiency > 98% or	[G]§ 115.125 § 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(i)	§ 115.126 § 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(i)	None

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O2 for combustion devices).	§ 115.126(2) ** See CAM Summary	§ 115.126(2)	
D3023	EP	R5121-3	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(2) § 115.121(a)(2) § 115.122(a)(2)(B)	Vent gas affected by §115.121(a)(2) must be controlled properly with a control efficiency > 98% or to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O2 for combustion devices).	[G]§ 115.125 § 115.126(1) § 115.126(1)(C) § 115.126(2) ** See CAM Summary	§ 115.126 § 115.126(1) § 115.126(1)(C) § 115.126(2)	None
D310	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(a)(1) § 115.112(a)(2) § 115.112(a)(2)(A) § 115.112(a)(2)(B) § 115.112(a)(2)(C) § 115.112(a)(2)(D) § 115.112(a)(2)(E) § 115.114(a)(1)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)
D310	EU	60Kb	VOC	40 CFR Part 60, Subpart Kb	§ 60.112b(a)(1) § 60.112b(a)(1)(i) § 60.112b(a)(1)(ii)(B) § 60.112b(a)(1)(iii) § 60.112b(a)(1)(iv) § 60.112b(a)(1)(ix) § 60.112b(a)(1)(v) § 60.112b(a)(1)(vi) § 60.112b(a)(1)(vii) § 60.112b(a)(1)(viii)	Storage vessels specified in §60.112b(a) and equipped with a fixed roof in combination with an internal floating roof shall meet the specifications listed in §60.112b(a)(1)(i)-(ix).	§ 60.113b(a)(1) [G]§ 60.113b(a)(3) § 60.113b(a)(4) § 60.113b(a)(5) § 60.116b(a) § 60.116b(b) § 60.116b(c) § 60.116b(c) § 60.116b(e) § 60.116b(e)(1) [G]§ 60.116b(e)(3)	§ 60.115b § 60.115b(a)(2) § 60.116b(a) § 60.116b(b) § 60.116b(c)	§ 60.113b(a)(5) § 60.115b § 60.115b(a)(1) § 60.115b(a)(4)
D9867	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						requirements of this division.			
D9868	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
FLARE	EU	R-1111	OPACITY	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for emission event emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
GRP-EFR	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(a)(1) § 115.112(a)(2) § 115.112(a)(2)(A) § 115.112(a)(2)(B) § 115.112(a)(2)(C) § 115.112(a)(2)(D) § 115.112(a)(2)(E) § 115.112(a)(2)(F) § 115.114(a)(2)(A) § 115.114(a)(4)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(a)(2) § 115.114(a)(3) § 115.114(a)(4) § 115.114(a)(4)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(7)	§ 115.114(a)(2)(B) § 115.114(a)(4)(B) § 115.118(a)(3)
GRP-EFR	EU	60KB	VOC	40 CFR Part 60, Subpart Kb	[G]§ 60.112b(a)(2)	Storage vessels specified in §60.112b(a) and equipped with an external floating roof (pontoon or double-deck type) are to meet the specifications of §60.112b(a)(2)(i)-(iii).	[G]§ 60.113b(b)(1) [G]§ 60.113b(b)(2) § 60.113b(b)(3) § 60.113b(b)(4) § 60.113b(b)(4)(i) § 60.113b(b)(4)(i)(A) § 60.113b(b)(4)(i)(B) [G]§	§ 60.115b [G]§ 60.115b(b)(3) § 60.116b(a) § 60.116b(b) § 60.116b(c)	§ 60.113b(b)(4)(iii) § 60.113b(b)(5) § 60.113b(b)(6)(ii) § 60.115b § 60.115b(b)(1) [G]§ 60.115b(b)(2) § 60.115b(b)(4)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							60.113b(b)(4)(ii) § 60.113b(b)(4)(iii) § 60.113b(b)(5) [G]§ 60.113b(b)(6) § 60.116b(a) § 60.116b(b) § 60.116b(c) § 60.116b(e) § 60.116b(e)(1) [G]§ 60.116b(e)(3)		
GRP-FUG1	EU	R5352	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(10)	Instrumentation systems, as defined in 40 CFR §63.161 (January 17, 1997), that meet 40 CFR §63.169 (June 20, 1996) are exempt from the requirements of this division except §115.356(3)(C) of this title.	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None
GRP-FUG1	EU	R5352	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(11)	Sampling connection systems, as defined in 40 CFR §63.161 (January 17, 1997), that meet the requirements of 40 CFR §63.166(a) and (b) (June 20, 1996) are exempt from the requirements of this division except §115.356(3)(C) of this title.	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None
GRP-FUG1	EU	R5352	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(2) § 115.352(9)	Each pressure relief valve equipped with a rupture disk must comply with §115.352(9) and §115.356(3)(C).	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None
GRP-FUG1	EU	R5352	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10)	No flanges or other connectors shall be allowed to have a VOC leak, for	§ 115.354(1) § 115.354(10) § 115.354(11)	§ 115.352(7) § 115.354(10) § 115.356	None

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(8) § 115.357(12) § 115.357(8)	more than 15 days after discovery which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(3) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	[G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	
GRP-FUG1	EU	R5352	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(12) § 115.357(8)	No compressor seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
GRP-FUG1	EU	R5352	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(12) § 115.357(8)	No pump seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRP-FUG1	EU	60VV-01	VOC	40 CFR Part 60, Subpart VV	§ 60.482-2(b)(1) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-2(a)(2) [G]§ 60.482-2(b)(2) § 60.482-2(c)(1) [G]§ 60.482-2(c)(2) § 60.482-2(d) [G]§ 60.482-2(d)(1) § 60.482-2(d)(2) § 60.482-2(d)(3) [G]§ 60.482-2(d)(4) [G]§ 60.482-2(d)(5) [G]§ 60.482-2(d)(6) [G]§ 60.482-2(e) § 60.482-2(f) [G]§ 60.482-2(g) § 60.482-2(h) § 60.482-9(a) § 60.482-9(b) [G]§ 60.482-9(d) § 60.482-9(f) § 60.486(k)	If an instrument reading of 10,000 ppm or greater is measured for pumps in light liquid service, a leak is detected.	§ 60.482-1(f)(1) § 60.482-1(f)(2) [G]§ 60.482-1(f)(3) § 60.482-2(a)(1) [G]§ 60.482-2(b)(2) [G]§ 60.482-2(d)(4) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) [G]§ 60.485(e) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) [G]§ 60.486(e)(2) [G]§ 60.486(e)(4) [G]§ 60.486(f) [G]§ 60.486(h) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG1	EU	60VV-01	VOC	40 CFR Part 60, Subpart VV	§ 60.482-3(a) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) [G]§ 60.482-3(b) § 60.482-3(c) § 60.482-3(d) § 60.482-3(e)(1) § 60.482-3(e)(2) § 60.482-3(f) § 60.482-3(g)(1)	Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482-1(c) and paragraphs (h), (i), and (j) of this section.	§ 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) [G]§ 60.486(e)(2) [G]§ 60.486(e)(4) [G]§ 60.486(h) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.482-3(g)(2) § 60.482-3(h) [G]§ 60.482-3(i) § 60.482-3(j) § 60.482-9(a) § 60.482-9(b) § 60.486(k)				
GRP-FUG1	EU	60VV-01	VOC	40 CFR Part 60, Subpart VV	§ 60.482-4(a) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-4(b)(1) § 60.482-4(c) § 60.482-4(d)(1) § 60.482-4(d)(2) § 60.482-9(a) § 60.482-9(b) § 60.486(k)	Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in § 60.485(c).	§ 60.482-4(b)(2) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) § 60.486(e) § 60.486(e)(1) § 60.486(e)(3) [G]§ 60.486(e)(4) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG1	EU	60VV-01	VOC	40 CFR Part 60, Subpart VV	§ 60.482-5(a) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) [G]§ 60.482-5(b) § 60.482-5(c) § 60.486(k)	Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482-1(c) and paragraph (c) of this section.	§ 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG1	EU	60VV-01	VOC	40 CFR Part 60, Subpart VV	§ 60.482-6(a)(1) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-6(a)(2) § 60.482-6(b) § 60.482-6(c) § 60.482-6(d) § 60.482-6(e) § 60.486(k)	Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1(c) and paragraphs (d) and (e) of this section.	§ 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG1	EU	60VV-01	VOC	40 CFR Part 60,	§ 60.482-7(b)	If an instrument reading of	§ 60.482-1(f)(1)	§ 60.482-1(g)	§ 60.487(a)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				Subpart VV	§ 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-7(d)(1) § 60.482-7(d)(2) [G]§ 60.482-7(e) [G]§ 60.482-7(f) [G]§ 60.482-7(g) [G]§ 60.482-7(h) § 60.482-9(a) § 60.482-9(b) [G]§ 60.482-9(c) § 60.482-9(e) § 60.482-9(f) § 60.486(k)	10,000 ppm or greater is measured for valves in gas/vapor service and in light liquid service, a leak is detected.	§ 60.482-1(f)(2) [G]§ 60.482-1(f)(3) § 60.482-7(a)(1) [G]§ 60.482-7(a)(2) § 60.482-7(c)(1)(i) § 60.482-7(c)(1)(ii) § 60.482-7(c)(2) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) [G]§ 60.485(e) § 60.485(f)	[G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) [G]§ 60.486(e)(2) [G]§ 60.486(e)(4) [G]§ 60.486(f) § 60.486(j)	[G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG1	EU	60VV-01	VOC	40 CFR Part 60, Subpart VV	§ 60.482-8(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-8(a) § 60.482-8(a)(2) § 60.482-8(c)(1) § 60.482-8(c)(2) § 60.482-8(d) § 60.482-9(a) § 60.482-9(b) § 60.482-9(e) § 60.482-9(f) § 60.486(k)	For valves in heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-8(a)(1) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG1	EU	60VV-01	VOC	40 CFR Part 60, Subpart VV	§ 60.482-8(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-8(a) § 60.482-8(a)(2) § 60.482-8(c)(1) § 60.482-8(c)(2) § 60.482-8(d)	For pressure relief devices in light liquid or in heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-8(a)(1) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) [G]§ 60.485(e) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.482-9(a) § 60.482-9(b) § 60.486(k)				
GRP-FUG1	EU	60VV-01	VOC	40 CFR Part 60, Subpart VV	§ 60.482-8(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-8(a) § 60.482-8(a)(2) § 60.482-8(c)(1) § 60.482-8(c)(2) § 60.482-8(d) § 60.482-9(a) § 60.482-9(b) § 60.486(k)	For flanges and other connectors, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-8(a)(1) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG1	EU	60VV-01	VOC	40 CFR Part 60, Subpart VV	§ 60.482-10(d) § 60.18 § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-10(m) § 60.486(k)	Flares used to comply with this subpart shall comply with the requirements of §60.18.	§ 60.482-10(e) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) § 60.485(f) [G]§ 60.485(g)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(d) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG3	EU	R5352	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(10)	Instrumentation systems, as defined in 40 CFR §63.161 (January 17, 1997), that meet 40 CFR §63.169 (June 20, 1996) are exempt from the requirements of this division except §115.356(3)(C) of this title.	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None
GRP-FUG3	EU	R5352	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(11)	Sampling connection systems, as defined in 40 CFR §63.161 (January 17, 1997), that meet the requirements of 40 CFR §63.166(a) and (b) (June	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						20, 1996) are exempt from the requirements of this division except §115.356(3)(C) of this title.			
GRP-FUG3	EU	R5352	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(2) § 115.352(9)	Each pressure relief valve equipped with a rupture disk must comply with §115.352(9) and §115.356(3)(C).	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None
GRP-FUG3	EU	R5352	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(8) § 115.357(12) § 115.357(8)	No flanges or other connectors shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(11) § 115.354(3) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
GRP-FUG3	EU	R5352	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(12) § 115.357(8)	No compressor seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
GRP-FUG3	EU	R5352	VOC	30 TAC Chapter	§ 115.352(1)(B)	No pump seals shall be	§ 115.354(1)	§ 115.352(7)	None

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				115, Pet. Refinery & Petrochemicals	§ 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(12) § 115.357(8)	allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	
GRP-FUG3	EU	60VV-03	VOC	40 CFR Part 60, Subpart VV	§ 60.482-2(b)(1) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-2(a)(2) [G]§ 60.482-2(b)(2) § 60.482-2(c)(1) [G]§ 60.482-2(c)(2) § 60.482-2(d) [G]§ 60.482-2(d)(1) § 60.482-2(d)(2) § 60.482-2(d)(3) [G]§ 60.482-2(d)(4) [G]§ 60.482-2(d)(5) [G]§ 60.482-2(d)(6) [G]§ 60.482-2(e) § 60.482-2(f) [G]§ 60.482-2(g) § 60.482-2(h) § 60.482-9(a) § 60.482-9(b) [G]§ 60.482-9(d)	If an instrument reading of 10,000 ppm or greater is measured for pumps in light liquid service, a leak is detected.	§ 60.482-1(f)(1) § 60.482-1(f)(2) [G]§ 60.482-1(f)(3) § 60.482-2(a)(1) [G]§ 60.482-2(b)(2) [G]§ 60.482-2(d)(4) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) [G]§ 60.485(e) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) [G]§ 60.486(e)(2) [G]§ 60.486(e)(4) [G]§ 60.486(f) [G]§ 60.486(h) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.482-9(f) § 60.486(k)				
GRP-FUG3	EU	60VV-03	VOC	40 CFR Part 60, Subpart VV	§ 60.482-3(a) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) [G]§ 60.482-3(b) § 60.482-3(c) § 60.482-3(d) § 60.482-3(e)(1) § 60.482-3(e)(2) § 60.482-3(f) § 60.482-3(g)(1) § 60.482-3(g)(2) § 60.482-3(h) [G]§ 60.482-3(i) § 60.482-3(j) § 60.482-9(a) § 60.482-9(b) § 60.486(k)	Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482-1(c) and paragraphs (h), (i), and (j) of this section.	§ 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) [G]§ 60.486(e)(2) [G]§ 60.486(e)(4) [G]§ 60.486(h) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG3	EU	60VV-03	VOC	40 CFR Part 60, Subpart VV	§ 60.482-4(a) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-4(b)(1) § 60.482-4(c) § 60.482-4(d)(1) § 60.482-4(d)(2) § 60.482-9(a) § 60.482-9(b) § 60.486(k)	Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in § 60.485(c).	§ 60.482-4(b)(2) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) § 60.486(e) § 60.486(e)(1) § 60.486(e)(3) [G]§ 60.486(e)(4) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG3	EU	60VV-03	VOC	40 CFR Part 60, Subpart VV	§ 60.482-5(a) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) [G]§ 60.482-5(b) § 60.482-5(c)	Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482-1(c) and paragraph	§ 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.486(k)	(c) of this section.			
GRP-FUG3	EU	60VV-03	VOC	40 CFR Part 60, Subpart VV	§ 60.482-6(a)(1) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-6(a)(2) § 60.482-6(b) § 60.482-6(c) § 60.482-6(d) § 60.482-6(e) § 60.486(k)	Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1(c) and paragraphs (d) and (e) of this section.	§ 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG3	EU	60VV-03	VOC	40 CFR Part 60, Subpart VV	§ 60.482-7(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-7(d)(1) § 60.482-7(d)(2) [G]§ 60.482-7(e) [G]§ 60.482-7(f) [G]§ 60.482-7(g) [G]§ 60.482-7(h) § 60.482-9(a) § 60.482-9(b) [G]§ 60.482-9(c) § 60.482-9(e) § 60.482-9(f) § 60.486(k)	If an instrument reading of 10,000 ppm or greater is measured for valves in gas/vapor service and in light liquid service, a leak is detected.	§ 60.482-1(f)(1) § 60.482-1(f)(2) [G]§ 60.482-1(f)(3) § 60.482-7(a)(1) [G]§ 60.482-7(a)(2) § 60.482-7(c)(1)(i) § 60.482-7(c)(1)(ii) § 60.482-7(c)(2) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) [G]§ 60.485(e) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) [G]§ 60.486(e)(2) [G]§ 60.486(e)(4) [G]§ 60.486(f) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG3	EU	60VV-03	VOC	40 CFR Part 60, Subpart VV	§ 60.482-8(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-8(a) § 60.482-8(a)(2) § 60.482-8(c)(1) § 60.482-8(c)(2) § 60.482-8(d) § 60.482-9(a)	For valves in heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-8(a)(1) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.482-9(b) § 60.482-9(e) § 60.482-9(f) § 60.486(k)				
GRP-FUG3	EU	60VV-03	VOC	40 CFR Part 60, Subpart VV	§ 60.482-8(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-8(a) § 60.482-8(a)(2) § 60.482-8(c)(1) § 60.482-8(c)(2) § 60.482-8(d) § 60.482-9(a) § 60.482-9(b) § 60.486(k)	For pressure relief devices in light liquid or in heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-8(a)(1) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) [G]§ 60.485(e) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG3	EU	60VV-03	VOC	40 CFR Part 60, Subpart VV	§ 60.482-8(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-8(a) § 60.482-8(a)(2) § 60.482-8(c)(1) § 60.482-8(c)(2) § 60.482-8(d) § 60.482-9(a) § 60.482-9(b) § 60.486(k)	For flanges and other connectors, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-8(a)(1) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG3	EU	60VV-03	VOC	40 CFR Part 60, Subpart VV	§ 60.482-10(d) § 60.18 § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-10(m) § 60.486(k)	Flares used to comply with this subpart shall comply with the requirements of §60.18.	§ 60.482-10(e) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) § 60.485(f) [G]§ 60.485(g)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(d) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60,	§ 60.482-1a(d)	Equipment that is in	[G]§ 60.485a(b)(1)	§ 60.485a(b)(2)	None

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				Subpart VVa	§ 60.482-1a(a) § 60.482-1a(b) § 60.485a(b) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	vacuum service is excluded from the requirements of §60.482-2a to §60.482-10a, if it is identified as required in §60.486a(e)(5).	§ 60.485a(b)(2)	§ 60.486a(e) § 60.486a(e)(1) § 60.486a(e)(5)	
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	[G]§ 60.482-1a(e) § 60.482-1a(a) § 60.482-1a(b) § 60.485a(b) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	Equipment that an owner or operator designates as being in VOC service less than 300 hours (hr)/yr is excluded from the requirements of §§ 60.482-2a through 60.482-11a if it is identified as required in §60.486a(e)(6) and it meets any of the conditions specified in paragraphs (e)(1) through (3) of this section. §60.482-1a(e)(1)-(3)	[G]§ 60.485a(b)(1) § 60.485a(b)(2)	§ 60.485a(b)(2) § 60.486a(e) § 60.486a(e)(1) § 60.486a(e)(6)	None
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	[G]§ 60.482-2a(b)(1) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) § 60.482-2a(b)(2) § 60.482-2a(b)(2)(ii) § 60.482-2a(c)(1) [G]§ 60.482-2a(c)(2) § 60.482-2a(d) [G]§ 60.482-2a(d)(1) § 60.482-2a(d)(2) § 60.482-2a(d)(3) [G]§ 60.482-2a(d)(6)	The instrument reading that defines a leak in a pump in light liquid service is 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers or 2,000 ppm or greater for all other pumps, as specified in paragraphs (b)(1)(i) and (ii) of this section. §60.482-2a(b)(1)(i)-(ii)	§ 60.482-1a(f)(1) § 60.482-1a(f)(2) [G]§ 60.482-1a(f)(3) § 60.482-1a(g) § 60.482-2a(a)(1) § 60.482-2a(a)(2) § 60.482-2a(b)(2)(i) [G]§ 60.482-2a(d)(4) [G]§ 60.482-2a(d)(5) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(c)(2) [G]§ 60.485a(d)	§ 60.482-1a(g) § 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(2) [G]§ 60.486a(e)(4) § 60.486a(e)(7) [G]§ 60.486a(e)(8) § 60.486a(f) § 60.486a(f)(1) [G]§ 60.486a(h)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(b)(3) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(iii) § 60.487a(c)(2)(iv) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					[G]§ 60.482-2a(e) § 60.482-2a(f) [G]§ 60.482-2a(g) § 60.482-2a(h) § 60.482-9a(a) § 60.482-9a(b) [G]§ 60.482-9a(d) § 60.482-9a(f) § 60.485a(b) § 60.485a(c) § 60.485a(c)(1) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)		[G]§ 60.485a(e)		
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-3a(a) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) [G]§ 60.482-3a(b) § 60.482-3a(c) § 60.482-3a(d) § 60.482-3a(e)(2) § 60.482-3a(f) [G]§ 60.482-3a(g) § 60.482-3a(h) [G]§ 60.482-3a(i) § 60.482-3a(j) § 60.482-9a(a) § 60.482-9a(b) § 60.485a(b) § 60.485a(c) § 60.485a(c)(1) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482-3a(c) and paragraphs (h), (i), and (j) of this section.	§ 60.482-1a(g) § 60.482-3a(e)(1) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(c)(2) [G]§ 60.485a(d)	§ 60.482-1a(g) § 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(2) [G]§ 60.486a(e)(4) [G]§ 60.486a(e)(8) [G]§ 60.486a(h)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(b)(4) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(2)(v) § 60.487a(c)(2)(vi) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60,	§ 60.482-4a(a)	Except during pressure	§ 60.482-1a(g)	§ 60.482-1a(g)	§ 60.487a(a)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				Subpart VVa	§ 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) § 60.482-4a(b)(1) § 60.482-4a(b)(2) § 60.482-4a(c) § 60.482-4a(d)(1) § 60.482-4a(d)(2) § 60.482-9a(a) § 60.482-9a(b) § 60.485a(b) § 60.485a(c) § 60.485a(c)(1) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in §60.485a(c).	§ 60.482-4a(b)(2) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(c)(2) [G]§ 60.485a(d)	§ 60.485a(b)(2) § 60.486a(e) § 60.486a(e)(1) § 60.486a(e)(10) § 60.486a(e)(3) [G]§ 60.486a(e)(4) [G]§ 60.486a(e)(8)	§ 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-5a(a) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) [G]§ 60.482-5a(b) § 60.482-5a(c) § 60.485a(b) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482-1a(c) and paragraph (c) of this section.	§ 60.482-1a(g) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) [G]§ 60.485a(d)	§ 60.482-1a(g) § 60.485a(b)(2) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-6a(a)(1) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) § 60.482-6a(a)(2) § 60.482-6a(b) § 60.482-6a(c) § 60.482-6a(d) § 60.482-6a(e) § 60.485a(b)	Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1a(c) and paragraphs (d) and (e) of this section.	§ 60.482-1a(g) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) [G]§ 60.485a(d)	§ 60.482-1a(g) § 60.485a(b)(2) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)				
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-7a(b) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) § 60.482-7a(a)(1) [G]§ 60.482-7a(d) [G]§ 60.482-7a(e) [G]§ 60.482-7a(f) [G]§ 60.482-7a(g) [G]§ 60.482-7a(h) § 60.485a(b) § 60.485a(c) § 60.485a(c)(1) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	At a valve in gas vapor service if an instrument reading of 500 ppm or greater is measured, a leak is detected.	§ 60.482-1a(f)(1) § 60.482-1a(f)(2) [G]§ 60.482-1a(f)(3) § 60.482-1a(g) § 60.482-7a(a)(1) [G]§ 60.482-7a(a)(2) [G]§ 60.482-7a(c) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(c)(2) [G]§ 60.485a(d) [G]§ 60.485a(e)	§ 60.482-1a(g) § 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(2) [G]§ 60.486a(e)(4) [G]§ 60.486a(e)(8) § 60.486a(f) § 60.486a(f)(1) § 60.486a(f)(2)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(b)(2) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(i) § 60.487a(c)(2)(ii) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-8a(b) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) [G]§ 60.482-2a(c)(2) [G]§ 60.482-7a(e) § 60.482-8a(a) § 60.482-8a(a)(2) [G]§ 60.482-8a(c) § 60.482-8a(d) § 60.482-9a(a) § 60.482-9a(b) [G]§ 60.482-9a(d) § 60.482-9a(f) § 60.485a(b) § 60.485a(f)	At a pump in heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-1a(g) § 60.482-8a(a)(1) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) [G]§ 60.485a(d)	§ 60.482-1a(g) § 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)				
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-8a(b) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) [G]§ 60.482-2a(c)(2) [G]§ 60.482-7a(e) § 60.482-8a(a) § 60.482-8a(a)(2) [G]§ 60.482-8a(c) § 60.482-8a(d) § 60.482-9a(a) § 60.482-9a(b) § 60.482-9a(c) § 60.482-9a(c)(1) § 60.482-9a(e) § 60.482-9a(f) § 60.485a(b) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	At a valve in heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-1a(g) § 60.482-8a(a)(1) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) [G]§ 60.485a(d)	§ 60.482-1a(g) § 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-8a(b) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) [G]§ 60.482-2a(c)(2) [G]§ 60.482-7a(e) § 60.482-8a(a) § 60.482-8a(a)(2) [G]§ 60.482-8a(c) § 60.482-8a(d) § 60.482-9a(a) § 60.482-9a(b)	At a pressure relief device in light liquid or heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-1a(g) § 60.482-8a(a)(1) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) [G]§ 60.485a(d) [G]§ 60.485a(e)	§ 60.482-1a(g) § 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.485a(b) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)				
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-8a(b) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) [G]§ 60.482-2a(c)(2) [G]§ 60.482-7a(e) § 60.482-8a(a) § 60.482-8a(a)(2) [G]§ 60.482-8a(c) § 60.482-8a(d) § 60.482-9a(a) § 60.482-9a(b) § 60.482-9a(c) § 60.482-9a(c)(1) § 60.482-9a(c)(2) § 60.482-9a(f) § 60.485a(b) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	At a connector in heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-1a(g) § 60.482-8a(a)(1) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) [G]§ 60.485a(d)	§ 60.482-1a(g) § 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-10a(d) § 60.18 § 60.482-10a(a) § 60.482-10a(m) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) § 60.485a(b) § 60.485a(c) § 60.485a(c)(1) § 60.485a(f)	Flares used to comply with this subpart shall comply with the requirements of §60.18.	§ 60.482-10a(e) § 60.482-1a(g) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(c)(2) [G]§ 60.485a(d) [G]§ 60.485a(g)	§ 60.482-1a(g) § 60.485a(b)(2) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)				
GRP-FUG3	EU	60VVa	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-11a(b)(2) § 60.482-11a(b)(3) § 60.482-11a(b)(3)(i) § 60.482-11a(d) [G]§ 60.482-11a(e) [G]§ 60.482-11a(f)(1) § 60.482-11a(f)(2) § 60.482-11a(g) § 60.485a(b) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	If an instrument reading greater than or equal to 500 ppm is measured in connectors in gas and vapor and light liquid service, a leak is detected.	§ 60.482-11a(a) § 60.482-11a(b) § 60.482-11a(b)(1) § 60.482-11a(b)(3) § 60.482-11a(b)(3)(ii) [G]§ 60.482-11a(b)(3)(iii) § 60.482-11a(b)(3)(iv) § 60.482-11a(c) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) [G]§ 60.485a(e)	§ 60.482-11a(b)(3)(v) § 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8) § 60.486a(e)(9) § 60.486a(f) § 60.486a(f)(1)	§ 60.487a(b) § 60.487a(b)(1) § 60.487a(b)(5) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(i) § 60.487a(c)(2)(ix) § 60.487a(c)(2)(vii) § 60.487a(c)(2)(viii) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)
GRP-FWPUMP	EU	63ZZZZ-01	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6603(a)-Table2d.4 § 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(h) § 63.6625(i) § 63.6640(b) § 63.6640(f)(1) [G]§ 63.6640(f)(2) [G]§ 63.6640(f)(4)	For each existing emergency stationary CI RICE and black start stationary CI RICE, located at an area source, you must comply with the requirements as specified in Table 2d.4.a-c.	§ 63.6625(f) § 63.6625(i) § 63.6640(a) § 63.6640(a)-Table6.9.a.i § 63.6640(a)-Table6.9.a.ii § 63.6640(b)	§ 63.6625(i) § 63.6655(a) § 63.6655(a)(1) § 63.6655(d) § 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6640(b) § 63.6640(e) § 63.6650(f)
GRP-GEN1	EU	60III-02	CO	40 CFR Part 60, Subpart III	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 37 KW and less than 130 KW and a	None	None	[G]§ 60.4214(d)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.4218 § 89.112(a)	displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a CO emission limit of 5.0 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a).			
GRP-GEN1	EU	60III-02	NMHC and NO <sub>x</sub>	40 CFR Part 60, Subpart III	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218 § 89.112(a)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 75 KW and less than or equal to 560 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with an NMHC+NO <sub>x</sub> emission limit of 4.0 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a).	None	None	[G]§ 60.4214(d)
GRP-GEN1	EU	60III-02	PM (OPACITY)	40 CFR Part 60, Subpart III	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218 § 89.113(a)(1) § 89.113(a)(2) § 89.113(a)(3)	Emergency stationary CI ICE, that are not fire pump engines, with displacement < 10 lpc and not constant-speed engines, with max engine power < 2237 KW and a 2007 model year and later or max engine power > 2237 KW and a 2011 model year and later, must comply with following opacity emission limits: 20% during acceleration, 15% during lugging, 50% during peaks	None	None	[G]§ 60.4214(d)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						in either acceleration or lugging modes as stated in §60.4202(a)(1)-(2), (b)(2) and §89.113(a)(1)-(3) and §1039.105(b)(1)-(3).			
GRP-GEN1	EU	60III-02	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218 § 89.112(a)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 75 KW and less than 130 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a PM emission limit of 0.30 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a).	None	None	[G]§ 60.4214(d)
GRP-GEN1	EU	63ZZZZ-02	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRP-GEN2	EU	60III-03	CO	40 CFR Part 60, Subpart III	§ 60.4205(b) § 60.4202(e)(1) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218 § 94.8(a)(2)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder and is a 2007 model year and later must comply with a CO emission limit of 5.0 g/KW-hr, as stated in 40 CFR 60.4202(e)-(f) and 40 CFR 94.8(a)(2) and 40 CFR 1042.101.	None	None	[G]§ 60.4214(d)
GRP-GEN2	EU	60III-03	Total Hydrocarbons/NO	40 CFR Part 60, Subpart III	§ 60.4205(b) § 60.4202(e)(1) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218 § 94.8(a)(2)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a displacement of greater than or equal to 20 liters per cylinder and less than 25 liters per cylinder and is a 2007 - 2013 model year must comply with a THC+NOx emission limit of 9.8 g/KW-hr, as stated in 40 CFR 60.4202(e)(1), (e)(3) and 40 CFR 94.8(a)(2).	None	None	[G]§ 60.4214(d)
GRP-GEN2	EU	60III-03	PM	40 CFR Part 60, Subpart III	§ 60.4205(b) § 60.4202(e)(1) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder and is a	None	None	[G]§ 60.4214(d)

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 94.8(a)(2)	2007 - 2013 model year must comply with a PM emission limit of 0.50 g/KW-hr, as stated in 40 CFR 60.4202(e)(1), (e)(3) and 40 CFR 94.8(a)(2).			
GRP-GEN2	EU	63ZZZZ-03	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
GRP-HFR	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(a)(1) § 115.112(a)(3)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.115(a) § 115.115(a)(6) [G]§ 115.117	§ 115.118(a)(4) § 115.118(a)(4)(F) § 115.118(a)(5) § 115.118(a)(7)	None
GRP-HFR	EU	60Kb	VOC	40 CFR Part 60, Subpart Kb	[G]§ 60.112b(a)(3)	Storage vessels specified in §60.112b(a) and equipped with a closed vent system/control device are to meet the specifications of §60.112b(a)(3)(i)-(ii).	[G]§ 60.113b(c)(1) § 60.113b(c)(2) § 60.116b(a) § 60.116b(b) § 60.116b(e) § 60.116b(e)(1) [G]§ 60.116b(e)(3)	§ 60.115b [G]§ 60.115b(c) § 60.116b(a) § 60.116b(b)	[G]§ 60.113b(c)(1) § 60.115b

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							[G]§ 60.485(b) ** See Periodic Monitoring Summary		
GRP-LOAD	EU	R-5211	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.212(a)(1) § 115.212(a)(1)(B) § 115.212(a)(3)(A) § 115.212(a)(3)(A)(ii) § 115.212(a)(3)(B) [G]§ 115.212(a)(3)(C) § 115.212(a)(3)(E) § 115.214(a)(1)(B) § 115.214(a)(1)(C)	At operations other than gasoline terminals, gasoline bulk plants, and marine terminals, vapors of VOC with a true vapor pressure of 0.5 psia or greater, must be controlled by one of the following methods.	§ 115.212(a)(3)(B) § 115.214(a)(1)(A) § 115.214(a)(1)(A)(i) § 115.214(a)(1)(A)(ii) § 115.214(a)(1)(A)(iii) § 115.215 § 115.215(1) § 115.215(10) [G]§ 115.215(2) § 115.215(4) § 115.215(9)	§ 115.216 § 115.216(2) § 115.216(3)(A) § 115.216(3)(A)(i) § 115.216(3)(A)(ii) § 115.216(3)(A)(iii) § 115.216(3)(B)	None
PAINT-1	PRO	R5421	VOC	30 TAC Chapter 115, Surface Coating Operations	§ 115.420 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 30 TAC Chapter 115, Surface Coating Operations	The permit holder shall comply with the applicable requirements of 30 TAC Chapter 115, Surface Coating Operations	The permit holder shall comply with the applicable monitoring and testing requirements of 30 TAC Chapter 115, Surface Coating Operations	The permit holder shall comply with the applicable recordkeeping requirements of 30 TAC Chapter 115, Surface Coating Operations	The permit holder shall comply with the applicable reporting requirements of 30 TAC Chapter 115, Surface Coating Operations
REACT ACRO	EP	60III	VOC/TOC	40 CFR Part 60, Subpart III	§ 60.612(a)	For each vent stream, reduce emissions of TOC by 98 wt%, or TOC concentration of 20 ppmv, dry basis corrected to 3 % O <sub>2</sub> (use less stringent). If boiler/process heater used to comply, insert vent stream in flame zone.	§ 60.613(f) § 60.614(a) § 60.614(b) § 60.614(b)(1) § 60.614(b)(2) § 60.614(b)(3) [G]§ 60.614(b)(4) ** See CAM Summary	§ 60.615(b) § 60.615(g) § 60.615(l)	§ 60.613(f) § 60.615(a) § 60.615(b) § 60.615(g) § 60.615(i) § 60.615(j) § 60.615(j)(1) § 60.615(l)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
REACT ACRO	EU	63VVVVV V	VOC	40 CFR Part 63, Subpart VVVVVV	§ 63.11498(a)-Table 6 [G]§ 63.11495(2) [G]§ 63.11495(4) § 63.11495(3) § 63.11495(a)(1) § 63.11501	Comply with the requirements of this section and in Table 6 to this subpart for all wastewater streams from a CMPU subject to this subpart.	§ 63.11495(3)	§ 63.11495(5) § 63.11501(c)(1) § 63.11501(c)(1)(i) § 63.11501(c)(1)(vi) § 63.11501(c)(2)(ii) § 63.11501(c)(5)	[G]§ 63.11501(b)(1) § 63.11501(d) § 63.11501(d)(1) § 63.11501(d)(3) § 63.11501(d)(4)
SULFOX-TO	EU	60Dc	SO <sub>2</sub>	40 CFR Part 60, Subpart Dc	§ 60.40c(a)	This subpart applies to each steam generating unit constructed, reconstructed, or modified after 6/9/89 and that has a maximum design heat input capacity of 2.9-29 megawatts (MW).	None	§ 60.48c(g)(1) § 60.48c(g)(2) § 60.48c(g)(3) § 60.48c(j)	[G]§ 60.48c(a)
SULFOX-TO	EU	60Dc	PM	40 CFR Part 60, Subpart Dc	§ 60.40c(a)	This subpart applies to each steam generating unit constructed, reconstructed, or modified after 6/9/89 and that has a maximum design heat input capacity of 2.9-29 megawatts (MW).	None	§ 60.48c(g)(1) § 60.48c(g)(2) § 60.48c(g)(3) § 60.48c(j)	[G]§ 60.48c(a)
SULFOX-TO	EU	60Dc	PM (OPACITY)	40 CFR Part 60, Subpart Dc	§ 60.40c(a)	This subpart applies to each steam generating unit constructed, reconstructed, or modified after 6/9/89 and that has a maximum design heat input capacity of 2.9-29 megawatts (MW).	None	§ 60.48c(g)(1) § 60.48c(g)(2) § 60.48c(g)(3) § 60.48c(j)	[G]§ 60.48c(a)

**Additional Monitoring Requirements**

**Compliance Assurance Monitoring Summary ..... 56**

**Periodic Monitoring Summary..... 65**

## CAM Summary

<b>Unit/Group/Process Information</b>	
ID No.: D226	
Control Device ID No.: FLARE	Control Device Type: Flare
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-1
Pollutant: VOC	Main Standard: § 115.122(a)(2)
<b>Monitoring Information</b>	
Indicator: Net Heating Value	
Minimum Frequency: Once per day	
Averaging Period: n/a*	
Deviation Limit: Minimum net heating value of the gas combusted is less than 200 Btu/scf.	
CAM Text: Calculate the net heating value of the gas being combusted using the procedures and specifications of 40 CFR § 60.18(f)(3). The sample points should 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.	

\*The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.

## CAM Summary

<b>Unit/Group/Process Information</b>	
ID No.: D226	
Control Device ID No.: FLARE	Control Device Type: Flare
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-1
Pollutant: VOC	Main Standard: § 115.122(a)(2)
<b>Monitoring Information</b>	
Indicator: Inlet Flow Rate	
Minimum Frequency: Once per day	
Averaging Period: n/a*	
Deviation Limit: A maximum inlet gas flow rate greater than 334 scf/sec (1.208 MMscf/hr).	
<p>CAM Text: Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following:</p> <ul style="list-style-type: none"> <li>± 2% of span; or</li> <li>± 5% of design flow rate.</li> </ul>	

\*The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.

## CAM Summary

<b>Unit/Group/Process Information</b>	
ID No.: D226	
Control Device ID No.: INCIN	Control Device Type: Thermal Incinerator (Direct Flame Incinerator/Regenerative Thermal Oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R-5121-2
Pollutant: VOC	Main Standard: § 115.122(a)(2)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: once per day	
Averaging Period: n/a*	
Deviation Limit: The minimum combustion temperature is less than 1380 F.	
<p>CAM Text: The monitoring device should be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following:</p> <ul style="list-style-type: none"> <li>± 0.75% of the temperature being measured expressed in degrees Celsius; or</li> <li>± 2.5 degrees Celsius.</li> </ul>	

\*The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.

## CAM Summary

<b>Unit/Group/Process Information</b>	
ID No.: D226	
Control Device ID No.: SULFOX-TO	Control Device Type: Vapor Combustor
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-3
Pollutant: VOC	Main Standard: § 115.122(a)(2)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: once per day	
Averaging Period: n/a*	
Deviation Limit: Minimum combustion temperature is less than 1650F.	
<p>CAM Text: The monitoring device should be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following:</p> <ul style="list-style-type: none"> <li>± 2% of reading; or</li> <li>± 2.5 degrees Celsius.</li> </ul>	

\*The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.

## CAM Summary

<b>Unit/Group/Process Information</b>	
ID No.: D3023	
Control Device ID No.: FLARE	Control Device Type: Flare
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-1
Pollutant: VOC	Main Standard: § 115.122(a)(2)
<b>Monitoring Information</b>	
Indicator: Net Heating Value	
Minimum Frequency: Once per day	
Averaging Period: n/a*	
Deviation Limit: Minimum net heating value of the gas combusted is less than 200 Btu/scf.	
CAM Text: Calculate the net heating value of the gas being combusted using the procedures and specifications of 40 CFR § 60.18(f)(3). The sample points should 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.	

\*The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.

## CAM Summary

<b>Unit/Group/Process Information</b>	
ID No.: D3023	
Control Device ID No.: FLARE	Control Device Type: Flare
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-1
Pollutant: VOC	Main Standard: § 115.122(a)(2)
<b>Monitoring Information</b>	
Indicator: Inlet Flow Rate	
Minimum Frequency: Once per day	
Averaging Period: n/a*	
Deviation Limit: A maximum inlet gas flow rate greater than 334 scf/sec (1.208 MMscf/hr).	
<p>CAM Text: Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following:</p> <ul style="list-style-type: none"> <li>± 2% of span; or</li> <li>± 5% of design flow rate.</li> </ul>	

\*The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.

## CAM Summary

<b>Unit/Group/Process Information</b>	
ID No.: D3023	
Control Device ID No.: INCIN	Control Device Type: Thermal Incinerator (Direct Flame Incinerator/Regenerative Thermal Oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R-5121-2
Pollutant: VOC	Main Standard: § 115.122(a)(2)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: once per day	
Averaging Period: n/a*	
Deviation Limit: The minimum combustion temperature is less than 1380 F.	
<p>CAM Text: The monitoring device should be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following:</p> <ul style="list-style-type: none"> <li>± 0.75% of the temperature being measured expressed in degrees Celsius; or</li> <li>± 2.5 degrees Celsius.</li> </ul>	

\*The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.

## CAM Summary

<b>Unit/Group/Process Information</b>	
ID No.: D3023	
Control Device ID No.: SULFOX-TO	Control Device Type: Vapor Combustor
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-3
Pollutant: VOC	Main Standard: § 115.122(a)(2)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: once per day	
Averaging Period: n/a*	
Deviation Limit: Minimum combustion temperature is less than 1650F.	
<p>CAM Text: The monitoring device should be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following:</p> <ul style="list-style-type: none"> <li>± 2% of reading; or</li> <li>± 2.5 degrees Celsius.</li> </ul>	

\*The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.

## CAM Summary

<b>Unit/Group/Process Information</b>	
ID No.: REACT ACRO	
Control Device ID No.: SULFOX-TO	Control Device Type: Vapor Combustor
<b>Applicable Regulatory Requirement</b>	
Name: 40 CFR Part 60, Subpart III	SOP Index No.: 60III
Pollutant: VOC/TOC	Main Standard: § 60.612(a)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: four times per hour	
Averaging Period: one hour	
Deviation Limit: Minimum temperature is less than 1650F.	
<p>CAM Text: The monitoring device should be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following:</p> <ul style="list-style-type: none"> <li>± 0.75% of the temperature being measured expressed in degrees Celsius; or</li> <li>± 2.5 degrees Celsius.</li> </ul>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: GRP-HFR	
Control Device ID No.: SULFOX-TO	Control Device Type: Thermal Incinerator (Direct Flame Incinerator/Regenerative Thermal Oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 40 CFR Part 60, Subpart Kb	SOP Index No.: 60Kb
Pollutant: VOC	Main Standard: [G]§ 60.112b(a)(3)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: Once per week	
Averaging Period: n/a*	
Deviation Limit: Minimum combustion temperature not less than 1650 F.	
<p>Periodic Monitoring Text: Measure and record the combustion temperature in the combustion chamber or immediately downstream of the combustion chamber. The monitoring instrumentation shall be maintained, calibrated and operated in accordance with manufacturer's specifications or other written procedures. Any monitoring data below the minimum limit shall be considered and reported as a deviation.</p>	

\*The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.

**Permit Shield**

**Permit Shield ..... 67**

## Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
D226	N/A	40 CFR Part 63, Subpart EEEE	The site is not a major source of HAPs and was not a major source at the time of applicability.
D226	N/A	40 CFR Part 63, Subpart F	This site is not a major source of HAPs, and was not a major source at the time of applicability.
D226	N/A	40 CFR Part 63, Subpart FFFF	The site is not a major source of HAPs and was not a major source at the time of applicability.
D226	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs and was not a major source at the time of applicability.
D226	N/A	40 CFR Part 63, Subpart VVVVVV	The mercaptan process contains none of the 63VVVVVV Table 1 Compounds
D3023	N/A	40 CFR Part 63, Subpart EEEE	The site is not a major source of HAPs and was not a major source at the time of applicability.
D3023	N/A	40 CFR Part 63, Subpart F	This site is not a major source of HAPs, and was not a major source at the time of applicability.
D3023	N/A	40 CFR Part 63, Subpart FFFF	The site is not a major source of HAPs and was not a major source at the time of applicability.

## Permit Shield

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Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
D3023	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs and was not a major source at the time of applicability.
D310	N/A	40 CFR Part 60, Subpart K	Tank was modified after 5/19/78.
D310	N/A	40 CFR Part 60, Subpart Ka	Tank was modified after 7/23/84.
D310	N/A	40 CFR Part 63, Subpart EEEE	The site is not a major source of HAPs and was not a major source at the time of applicability.
D310	N/A	40 CFR Part 63, Subpart F	The site is not a major source of HAPs and was not a major source at the time of applicability.
D310	N/A	40 CFR Part 63, Subpart FFFF	The site is not a major source of HAPs and was not a major source at the time of applicability.
D310	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs and was not a major source at the time of applicability.
D8550	N/A	30 TAC Chapter 115, Storage of VOCs	Not in VOC service.
D8550	N/A	40 CFR Part 60, Subpart K	Tank was modified after 5/19/1978.
D8550	N/A	40 CFR Part 60, Subpart Ka	Tank was modified after 7/23/84.
D8550	N/A	40 CFR Part 60, Subpart Kb	Tank is < 40 m3.

## Permit Shield

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Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
D8550	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs, and was not a major source at the time of applicability.
D8560	N/A	30 TAC Chapter 115, Storage of VOCs	Not in VOC service.
D8560	N/A	40 CFR Part 60, Subpart K	Tank was modified after 5/19/78.
D8560	N/A	40 CFR Part 60, Subpart Ka	Tank was modified after 7/23/84.
D8560	N/A	40 CFR Part 60, Subpart Kb	Tank is < 40 m3.
D8560	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs, and was not a major source at the time of applicability.
D8570	N/A	30 TAC Chapter 115, Storage of VOCs	Not in VOC service.
D8570	N/A	40 CFR Part 60, Subpart K	Tank was modified after 5/19/78.
D8570	N/A	40 CFR Part 60, Subpart Ka	Tank was modified after 7/23/84.
D8570	N/A	40 CFR Part 60, Subpart Kb	Tank is < 40 m3.
D8570	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs, and was not a major source at the time of applicability.
D8640	N/A	30 TAC Chapter 115, Storage of VOCs	Not in VOC service.
D8640	N/A	40 CFR Part 60, Subpart K	Tank was modified after 5/19/78.

## Permit Shield

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Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
D8640	N/A	40 CFR Part 60, Subpart Ka	Tank was modified after 7/23/84.
D8640	N/A	40 CFR Part 60, Subpart Kb	Tank is < 40 m3.
D8640	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs, and was not a major source at the time of applicability.
D8873	N/A	30 TAC Chapter 115, Storage of VOCs	Not in VOC service.
D8873	N/A	40 CFR Part 60, Subpart K	Tank was modified after 5/19/78.
D8873	N/A	40 CFR Part 60, Subpart Ka	Tank was modified after 7/23/84.
D8873	N/A	40 CFR Part 60, Subpart Kb	Tank is < 40 m3.
D8873	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs, and was not a major source at the time of applicability.
D8874	N/A	30 TAC Chapter 115, Storage of VOCs	Not in VOC service.
D8874	N/A	40 CFR Part 60, Subpart K	Tank was modified after 5/19/78.
D8874	N/A	40 CFR Part 60, Subpart Ka	Tank was modified after 7/23/84.
D8874	N/A	40 CFR Part 60, Subpart Kb	Tank is < 40 m3.
D8874	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs, and was not a major source at the time of applicability.

## Permit Shield

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Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
D9867	N/A	40 CFR Part 60, Subpart K	Tank was modified after 5/19/78.
D9867	N/A	40 CFR Part 60, Subpart Ka	Tank was modified after 7/23/84.
D9867	N/A	40 CFR Part 60, Subpart Kb	Tank volume > 151 m <sup>3</sup> and max vapor pressure of liquid stored is < 3.5 kPa.
D9867	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs, and was not a major source at the time of applicability.
D9868	N/A	40 CFR Part 60, Subpart K	Tank was modified after 5/19/78.
D9868	N/A	40 CFR Part 60, Subpart Ka	Tank was modified after 7/23/84.
D9868	N/A	40 CFR Part 60, Subpart Kb	75 m <sup>3</sup> < Tank volume < 151 m <sup>3</sup> and max vapor pressure of liquid stored is < 3.5 kPa.
D9868	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs, and was not a major source at the time of applicability.
DIST ACRO	N/A	40 CFR Part 60, Subpart NNN	Unit does not produce a product, co-product, by-product or intermediate listed.
DIST ACRO	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAPs and was not a major source at the time of applicability.

## Permit Shield

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Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
DIST ACRO	N/A	40 CFR Part 63, Subpart VVVVVV	Unit does not produce a product, co-product, by-product or intermediate listed.
DIST F1	N/A	40 CFR Part 60, Subpart NNN	Unit does not produce a product, co-product, by-product or intermediate listed.
DIST MMP	N/A	40 CFR Part 60, Subpart NNN	Unit does not produce a product, co-product, by-product or intermediate listed.
DIST MMP	N/A	40 CFR Part 63, Subpart VVVVVV	Unit does not produce a product, co-product, by-product or intermediate listed.
FLARE	N/A	40 CFR Part 60, Subpart A	Flare is not a control device for any NSPS or NESHAP affected facilities.
FLARE	N/A	40 CFR Part 63, Subpart A	Flare is not required by another Subpart.
GRP-BDIST	DIST BI, DIST BII, DIST DMDS, DIST DMS	40 CFR Part 60, Subpart NNN	Unit does not produce a product, co-product, by-product or intermediate listed.
GRP-BREACT	REACT B1, REACT BII	40 CFR Part 60, Subpart RRR	Unit does not produce a product, co-product, by product, or intermediate listed
GRP-EFR	D2307, D307	40 CFR Part 60, Subpart K	Tank was modified after 5/19/78.

## Permit Shield

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Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
GRP-EFR	D2307, D307	40 CFR Part 60, Subpart Ka	Tank was modified after 7/23/84.
GRP-EFR	D2307, D307	40 CFR Part 63, Subpart G	The site is not a major source of HAP and was not a major source at the time of applicability.
GRP-FUG1	ACRO-FUG, ACROTK-FUG, BMT-2M, DMS, F-1, FLAREFUG, FUGINCIN, MMP-FUG, MMPRC-FUG, MMPTKS-FUG, PR-TOWER, RCSHIP, RUNDOWN, STORAGE, SWS, TO-FUG, TTSHIP, WWTANKFUG	40 CFR Part 63, Subpart H	The site is not a major source of HAPs and was not a major source at the time of applicability.
GRP-FUG1	ACRO-FUG, ACROTK-FUG, BMT-2M, DMS, F-1, FLAREFUG, FUGINCIN, MMP-FUG, MMPRC-FUG, MMPTKS-FUG, PR-TOWER, RCSHIP, RUNDOWN, STORAGE, SWS, TO-FUG, TTSHIP, WWTANKFUG	40 CFR Part 63, Subpart I	The site is not a major source of HAPs and was not a major source at the time of applicability.
GRP-FUG3	BMT-1E/T, BMT-1M	40 CFR Part 63, Subpart H	The site is not a major source of HAPs and was not a major source at the time of applicability.
GRP-FUG3	BMT-1E/T, BMT-1M	40 CFR Part 63, Subpart I	The site is not a major source of HAPs and

## Permit Shield

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Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
			was not a major source at the time of applicability.
GRP-HFR	D8501A, D8501B, D8501C	40 CFR Part 60, Subpart K	Tank was modified after 5/19/78.
GRP-HFR	D8501A, D8501B, D8501C	40 CFR Part 60, Subpart Ka	Tank was modified after 7/23/84.
GRP-HFR	D8501A, D8501B, D8501C	40 CFR Part 63, Subpart G	The site is not a major source of HAPs, and was not a major source at the time of applicability.
GRP-LOAD	METH RAIL, RAIL LOAD, TRUCK LOAD	40 CFR Part 63, Subpart EEEE	The site is not a major source of HAP and was not a major source at the time of applicability.
GRP-LOAD	METH RAIL, RAIL LOAD, TRUCK LOAD	40 CFR Part 63, Subpart F	This site is not a major source of HAPs, and was not a major source at the time of applicability.
GRP-LOAD	METH RAIL, RAIL LOAD, TRUCK LOAD	40 CFR Part 63, Subpart FFFF	The site is not a major source of HAP and was not a major source at the time of applicability.
GRP-LOAD	METH RAIL, RAIL LOAD, TRUCK LOAD	40 CFR Part 63, Subpart G	Site is not a major source of HAP.
H202	N/A	30 TAC Chapter 112, Sulfur Compounds	Boiler does not fire liquid fuel.
H2202	N/A	30 TAC Chapter 112, Sulfur Compounds	Boiler does not fire liquid fuel.
H401	N/A	30 TAC Chapter 112, Sulfur Compounds	Boiler does not fire liquid fuel.

## Permit Shield

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Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
H402	N/A	30 TAC Chapter 117, Subchapter B	Industrial, commercial, or institutional boiler or process heater with a maximum rated capacity of less than 40 MMBtu/hr.
H501	N/A	30 TAC Chapter 112, Sulfur Compounds	Boiler does not fire liquid fuel.
H502	N/A	30 TAC Chapter 117, Subchapter B	Industrial, commercial, or institutional boiler or process heater with a maximum rated capacity of less than 40 MMBtu/hr.
INCIN	N/A	30 TAC Chapter 111, Incineration	Incinerator (thermal oxidizer) does not burn a waste covered by the regulation.
INCIN	N/A	40 CFR Part 63, Subpart EEE	This is not a hazardous waste combustor.
REACT ACRO	N/A	40 CFR Part 60, Subpart RRR	Unit does not produce a product, co-product, by-product, or intermediate listed.
REACT ACRO	N/A	40 CFR Part 63, Subpart G	The site is not a major source of HAP and was not a major source at the time of applicability.
REACT F1	N/A	40 CFR Part 60, Subpart RRR	Plant has not been modified since 6/29/90.
REACT MMP	N/A	40 CFR Part 60, Subpart III	Unit does not produce a product, co-product, by-product, or intermediate listed.

## Permit Shield

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Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
REACT MMP	N/A	40 CFR Part 60, Subpart RRR	Unit does not produce a product, co-product, by-product, or intermediate listed.
REACT MMP	N/A	40 CFR Part 63, Subpart FFFF	The site is not a major source of HAP and was not a major source at the time of applicability.
REACT MMP	N/A	40 CFR Part 63, Subpart VVVVVV	Unit does not produce a product, co-product, by-product or intermediate listed.
SULFOXCHLR	N/A	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	Not in VOC service.
SULFOXCHLR	N/A	40 CFR Part 60, Subpart VV	Not in VOC service.
SULFOX-CT	N/A	40 CFR Part 63, Subpart Q	The site is not a major source of HAPs, and was not a major source at the time of applicability.
SULFOX-INH	N/A	30 TAC Chapter 115, Storage of VOCs	Not in VOC service.
SULFOX-INH	N/A	40 CFR Part 63, Subpart EEEE	The site is not a major source of HAP and was not a major source at the time of applicability.
SULFOX-INH	N/A	40 CFR Part 63, Subpart F	The site is not a major source of HAPs, and was not a major source at the time of applicability.

## Permit Shield

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Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
SULFOX-INH	N/A	40 CFR Part 63, Subpart FFFF	The site is not a major source of HAP and was not a major source at the time of applicability.
SULFOX-INH	N/A	40 CFR Part 63, Subpart G	This site is not a major source of HAPs, and was not a major source at the time of applicability.
SULFOX-TO	N/A	40 CFR Part 60, Subpart Db	Maximum heat input capacity is < 100 MMBtu/hr
X426A	N/A	30 TAC Chapter 112, Sulfur Compounds	Boiler does not fire solid or liquid fuel.
X426A	N/A	30 TAC Chapter 117, Subchapter B	Boiler is less than 40 MMBtu/hr and is located in Beaumont/Port Arthur area.
X426A	N/A	30 TAC Chapter 117, Utility Electric Generation	Boiler is not used for electric power generation.
X426A	N/A	40 CFR Part 60, Subpart D	Boiler heat input is less than 250 MMBtu/hr.
X426A	N/A	40 CFR Part 60, Subpart Da	Boiler heat input is less than 250 MMBtu/hr.
X426A	N/A	40 CFR Part 60, Subpart Db	Boiler heat input is less than 100 MMBtu/hr.
X426B	N/A	30 TAC Chapter 112, Sulfur Compounds	Boiler does not fire solid or liquid fuel.
X426B	N/A	30 TAC Chapter 117, Subchapter B	Boiler is less than 40 MMBtu/hr and is

### Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
			located in Beaumont/Port Arthur area.
X426B	N/A	30 TAC Chapter 117, Utility Electric Generation	Boiler is not used for electric power generation.
X426B	N/A	40 CFR Part 60, Subpart D	Boiler heat input is less than 250MMBTu/hr.
X426B	N/A	40 CFR Part 60, Subpart Da	Boiler heat input is less than 250MMBTu/hr.
X426B	N/A	40 CFR Part 60, Subpart Db	Boiler heat input is less than 100 MMBtu/hr.

**New Source Review Authorization References**

**New Source Review Authorization References ..... 80**

**New Source Review Authorization References by Emission Unit..... 81**

## New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

<b>Prevention of Significant Deterioration (PSD) Permits</b>	
PSD Permit No.: PSDTX1016M1	Issuance Date: 07/15/2015
<b>Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.</b>	
Authorization No.: 865A	Issuance Date: 07/15/2015
<b>Permits By Rule (30 TAC Chapter 106) for the Application Area</b>	
Number: 106.452	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.474	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000

### New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
ACRO-FUG	ACROLEIN PROCESS AREA FUGITIVES	865A, PSDTX1016M1
ACROTK-FUG	ACROLEIN STORAGE AREA FUGITIVES	865A, PSDTX1016M1
BMT-1E/T	AREA FUGITIVES, BMT-I(ETHYL MERCAPTAN AND TBM PROD	865A, PSDTX1016M1
BMT-1M	AREA FUGITIVES, BMT-I (METHYL PRODUCTION)	865A, PSDTX1016M1
BMT-2M	AREA FUGITIVES, BMT-II (METHYL PRODUCTION)	865A, PSDTX1016M1
D226	FLARE KNOCKOUT POT (VENT TO FLARE) (FLARE HEADER)	865A, PSDTX1016M1
D2307	METHANOL STORAGE TANK - D2307 (EFR TANK)	865A, PSDTX1016M1
D3023	INCINERATOR (THERMAL OXIDIZER) KNOCKOUT POT	865A, PSDTX1016M1
D307	METHANOL STORAGE TANK - D307 (EFR TANK)	865A, PSDTX1016M1
D310	METHANOL STORAGE TANK - D307 (IFR TANK)	865A, PSDTX1016M1
D8501A	ACROLEIN STORAGE TANK - D8501A (HFR TANK)	865A, PSDTX1016M1
D8501B	ACROLEIN STORAGE TANK - D8501B (HFR TANK)	865A, PSDTX1016M1
D8501C	ACROLEIN STORAGE TANK - D8501C (HFR TANK)	865A, PSDTX1016M1
D8550	TREATED WASTEWATER TANK - D8550	865A, PSDTX1016M1
D8560	SULFOX HYDROQUINONE TANK - D8560	865A, PSDTX1016M1
D8570	SULFOX INHIBITOR TANK - D8570	865A, PSDTX1016M1
D8640	SULFOX ACETIC ACID TANK - D8640	865A, PSDTX1016M1
D8873	SULFOX ACETIC ACID TANK - D8873	865A, PSDTX1016M1

### New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
D8874	SULFOX MMP LOADING WATER WASTE TANK - D8874	865A, PSDTX1016M1
D9867	SULFOX MMP STORAGE TANK - D9867	865A, PSDTX1016M1
D9868	SULFOX MMP STORAGE TANK - D9868	865A, PSDTX1016M1
DIST ACRO	DISTILLATION PROCESSES IN THE ACROLEIN UNIT	865A, PSDTX1016M1
DIST BI	DISTILLATION PROCESSES IN THE BI UNIT	865A, PSDTX1016M1
DIST BII	DISTILLATION PROCESSES IN THE BII UNIT	865A, PSDTX1016M1
DIST DMDS	DISTILLATION PROCESSES IN THE DMDS UNIT	865A, PSDTX1016M1
DIST DMS	DISTILLATION PROCESSES IN THE DMS UNIT	865A, PSDTX1016M1
DIST F1	DISTILLATION PROCESSES IN THE H <sub>2</sub> S UNIT	865A, PSDTX1016M1
DIST MMP	DISTILLATION PROCESSES IN THE MMP UNIT	865A, PSDTX1016M1
DMS	AREA FUGITIVES, DIMETHYL SULFIDE AREA	865A, PSDTX1016M1
F-1	AREA FUGITIVES H <sub>2</sub> S PLANT	865A, PSDTX1016M1
FLARE	FACILITY FLARE	865A, PSDTX1016M1
FLAREFUG	AREA FUGITIVES, FLARE	865A, PSDTX1016M1
FUGINCIN	AREA FUGITIVES, INCINERATOR (THERMAL OXIDIZER)	865A, PSDTX1016M1
GENERATOR 1	EMERGENCY GENERATOR	106.511/09/04/2000
GENERATOR 2	EMERGENCY GENERATOR	106.511/09/04/2000
GENERATOR 3	EMERGENCY GENERATOR	106.511/09/04/2000

### New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
GENERATOR 4	EMERGENCY GENERATOR	106.511/09/04/2000
H202	HEAT TRANSFER FLUID HEATER	865A, PSDTX1016M1
H2202	HEAT TRANSFER FLUID HEATER	865A, PSDTX1016M1
H401	SULFUR HEATER	865A, PSDTX1016M1
H402	METHANE HEATER	865A, PSDTX1016M1
H501	SULFUR HEATER	865A, PSDTX1016M1
H502	METHANE HEATER	865A, PSDTX1016M1
INCIN	THERMAL INCINERATOR	865A, PSDTX1016M1
METH RAIL	METHANOL LOADED INTO RAILCAR FOR OFF-SITE SHIPMENT	865A, PSDTX1016M1
MMP-FUG	MMP PROCESS AREA FUGITIVES	865A, PSDTX1016M1
MMPRC-FUG	AREA FUG, RAIL CAR SHIPPING MMP RC LOADING AREA	865A, PSDTX1016M1
MMPTKS-FUG	AREA FUG, RAIL CAR SHIP MMP STORAGE AREA FUGITIVES	865A, PSDTX1016M1
P-217	FIRE WATER PUMP	106.511/09/04/2000
P-3192A	REACTS FIRE WATER PUMP	106.511/09/04/2000
P-3192B	REACTS FIRE WATER PUMP	106.511/09/04/2000
PAINT-1	MAINTENANCE PAINTING EMISSIONS	865A, PSDTX1016M1
PR-TOWER	AREA FUGITIVES, PRODUCT RECOVERY TOWER	865A, PSDTX1016M1

### New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
RAIL LOAD	PRODUCTS LOADED INTO RAILCAR FOR OFFSITE SHIPMENT	865A, PSDTX1016M1
RCSHIP	AREA FUGITIVES, RAIL CAR SHIPPING AREA	865A, PSDTX1016M1
REACT ACRO	ACROLEIN REACTOR	865A, PSDTX1016M1
REACT B1	REACTION PROCESSES IN THE BI UNIT	865A, PSDTX1016M1
REACT BII	REACTION PROCESSES IN THE BII UNIT	865A, PSDTX1016M1
REACT F1	REACTION PROCESS IN THE H <sub>2</sub> S UNIT	865A, PSDTX1016M1
REACT MMP	REACTION PROCESSES IN THE MMP UNIT	865A, PSDTX1016M1
RUNDOWN	AREA FUGITIVES, RUNDOWN TANK AREA	865A, PSDTX1016M1
STORAGE	AREA FUGITIVES, STORAGE TANK AREA	865A, PSDTX1016M1
SULFOXCHLR	SULFOX CHILLER SYSTEM	865A, PSDTX1016M1
SULFOX-CT	SULFOX COOLING TOWER	865A, PSDTX1016M1
SULFOX-INH	SULFOX INHIBITOR UNLOADING FILTER VENT (X-8564)	865A, PSDTX1016M1
SULFOX-TO	WASTEWATER VAPORIZER	865A, PSDTX1016M1
SWS	AREA FUGITIVES, SOUR WATER STRIPPER AREA	865A, PSDTX1016M1
TO-FUG	SULFOX THERMAL OXIDIZER FUGITIVES	865A, PSDTX1016M1
TRUCK LOAD	PRODUCTS LOADED INTO TRUCKS FOR OFF-SITE SHIPMENT	865A, PSDTX1016M1
TTSHIP	AREA FUGITIVES, TANK TRUCK SHIPPING AREA	865A, PSDTX1016M1
WWTANKFUG	ACROLEIN WW SYSTEM FUGITIVES	865A, PSDTX1016M1

**New Source Review Authorization References by Emissions Unit**

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

<b>Unit/Group/Process ID No.</b>	<b>Emission Unit Name/Description</b>	<b>New Source Review Authorization</b>
X426A	STEAM BOILER	865A, PSDTX1016M1
X426B	STEAM BOILER	865A, PSDTX1016M1

**Appendix A**

**Acronym List ..... 87**

## Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM	.....	actual cubic feet per minute
AMOC	.....	alternate means of control
ARP	.....	Acid Rain Program
ASTM	.....	American Society of Testing and Materials
B/PA	.....	Beaumont/Port Arthur (nonattainment area)
CAM	.....	Compliance Assurance Monitoring
CD	.....	control device
COMS	.....	continuous opacity monitoring system
CVS	.....	closed-vent system
D/FW	.....	Dallas/Fort Worth (nonattainment area)
DR	.....	Designated Representative
ELP	.....	El Paso (nonattainment area)
EP	.....	emission point
EPA	.....	U.S. Environmental Protection Agency
EU	.....	emission unit
FCAA Amendments	.....	Federal Clean Air Act Amendments
FOP	.....	federal operating permit
GF	.....	grandfathered
gr/100 scf	.....	grains per 100 standard cubic feet
HAP	.....	hazardous air pollutant
H/G/B	.....	Houston/Galveston/Brazoria (nonattainment area)
H <sub>2</sub> S	.....	hydrogen sulfide
ID No.	.....	identification number
lb/hr	.....	pound(s) per hour
MMBtu/hr	.....	Million British thermal units per hour
MRRT	.....	monitoring, recordkeeping, reporting, and testing
NA	.....	nonattainment
N/A	.....	not applicable
NADB	.....	National Allowance Data Base
NO <sub>x</sub>	.....	nitrogen oxides
NSPS	.....	New Source Performance Standard (40 CFR Part 60)
NSR	.....	New Source Review
ORIS	.....	Office of Regulatory Information Systems
Pb	.....	lead
PBR	.....	Permit By Rule
PM	.....	particulate matter
ppmv	.....	parts per million by volume
PSD	.....	prevention of significant deterioration
RO	.....	Responsible Official
SO <sub>2</sub>	.....	sulfur dioxide
TCEQ	.....	Texas Commission on Environmental Quality
TSP	.....	total suspended particulate
TVP	.....	true vapor pressure
U.S.C.	.....	United States Code
VOC	.....	volatile organic compound

**Appendix B**

**Major NSR Summary Table..... 89**

**Major NSR Summary Table**

Permit Number: 865A and PSDTX1016M1			Issuance Date: July 15, 2015				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY(4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
Column Main	Acrolein Unit Column/Filter	VOC	0.01	0.01			
D307	Methanol Tank	VOC	2.32	0.22	4, 40	4, 8, 40	4
	Methanol Tank (MSS)	VOC (10)	3.08	1.86	4, 37, 38, 39, 40	4, 8, 37, 38, 39, 40	4
D2307	Methanol Tank	VOC	2.32	0.22	4, 40	4, 8, 40	4
	Methanol Tank (MSS)	VOC (10)	3.08	1.86	4, 37, 38, 39, 40	4, 8, 37, 38, 39, 40	4
D398	Gasoline Tank	VOC	4.56	0.22			
D215	Diesel Tank	VOC	0.02	0.01			
D399	Diesel Tank	VOC	0.02	0.01			
D3191A	Diesel Tank	VOC	0.02	0.01			
D3191B	Diesel Tank	VOC	0.02	0.01			
D8540	Caustic Tank	NaOH	0.01	0.01			
FLARE	Flare Interim Limits (9)(11)	CO (8)	629.45	81.93	10, 19, 20	7, 10, 19	19
		H2S	13.42	7.41	10, 19, 20	7, 10, 19	19
		H2S (13)	67.74		10, 19, 20	7, 10, 19	19
		H2SO4	61.08	32.29	10, 19, 20	7, 10, 19	19
		NOx (8)	73.40	9.56	10, 19, 20	7, 10, 19	19
		SO2 (8)	3576.03	562.89	10, 19, 20, 28	7, 9, 10, 19, 28	19
		SO2 (8)(13)	8779.58		10, 19, 20, 28	7, 9, 10, 19, 28	19
		TRS	54.26	15.11	10, 19, 20, 41	7, 10, 19, 41	19
		TRS (13)	188.71		10, 19, 20, 41	7, 10, 19, 41	19
		VOC	41.26	9.04	4, 10, 19, 20, 41	4, 7, 9, 10, 19, 41	4, 19
VOC (13)	124.31		4, 10, 19, 20, 41	4, 7, 9, 10, 19, 41	4, 19		
FLARE	Flare Final Limits both routine and MSS operation (9)(12)	CO (8)	193.54	74.35	10, 19, 20	7, 10, 19	19
		H2S	24.08	2.82	10, 19, 20	7, 10, 19	19
		H2SO4	7.21	31.57	10, 19, 20	7, 10, 19	19
		H2SO4 (14)	29.18		10, 19, 20	7, 10, 19	19
		NOx (8)	22.56	8.67	10, 19, 20	7, 10, 19	19
		SO2 (8)	625.00	448.96	10, 19, 20, 28	7, 9, 10, 19, 28	19
		SO2 (8)(14)	3065.51		10, 19, 20, 28	7, 9, 10, 19, 28	19

**Major NSR Summary Table**

Permit Number: 865A and PSDTX1016M1			Issuance Date: July 15, 2015				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY(4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
		TRS	37.52	8.84	10, 19, 20, 41	7, 10, 19, 41	19
		TRS (14)	92.52		10, 19, 20, 41	7, 10, 19, 41	19
		VOC	49.38	6.63	4, 10, 19, 20, 41	4, 7, 9, 10, 19, 41	4, 19
		VOC (14)	70.32		4, 10, 19, 20, 41	4, 7, 9, 10, 19, 41	4, 19
H202	Heat Transfer Fluid Heater (31 MMBtu/hr)	CO	2.59	11.32			
		NOx	3.08	13.48	4	4	4
		PM/PM2.5/PM10	0.23	1.02			
		SO2	0.02	0.08	2, 4	2, 4	4
		VOC	0.17	0.74			
H401/H402	Sulfur Heater 401 & Methane Heater 402 (7)	CO	1.32	5.77			
		NOx	1.61	7.04	4	4	4
		PM/PM2.5/PM10	0.11	0.52			
		SO2	0.01	0.05	2, 4	2, 4	4
		VOC	0.09	0.38			
H501/H502	Sulfur Heater 501 & Methane Heater 502 (7)	CO	1.32	5.77			
		NOx	1.61	7.04	4	4	4
		PM/PM2.5/PM10	0.11	0.52			
		SO2	0.01	0.05	2, 4	2, 4	4
		VOC	0.09	0.38			
H2202	Heat Transfer Fluid Heater (31 MMBtu/hr)	CO	2.59	11.32			
		NOx	3.08	13.48	4	4	4
		PM/PM2.5/PM10	0.23	1.02			
		SO2	0.02	0.08	2, 4	2, 4	4
		VOC	0.17	0.74			
INCIN	Incinerator	CO	2.03	8.90	4, 19, 26, 27	4, 7, 19, 26, 27	4, 19, 26
		H2S	0.10	0.42	23	7, 23	23
		NOx	1.57	6.87	4, 19, 27	4, 7, 19, 27	4, 19
		PM/PM2.5/PM10	0.89	3.90	19	7, 19	19
		SO2	139.00	78.00	19, 23, 27	7, 9, 19, 23, 27	19, 23
		VOC	0.37	1.48	19, 23, 42	7, 19, 23, 42	19, 23
		TRS	0.36	1.43	23, 42	7, 23, 42	23

**Major NSR Summary Table**

Permit Number: 865A and PSDTX1016M1			Issuance Date: July 15, 2015				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY(4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
S-1	Sulfur Storage Tank	H2S	0.015	0.012	13	13	
		SO2	0.055	0.044	13	13	
		TRS	0.015	0.012	13	13	
S-2	Sulfur Pit	H2S	0.015	0.012	13	13	
		SO2	0.055	0.047	13	13	
		TRS	0.015	0.012	13	13	
S-3	Sulfur Truck	H2S	0.017	0.017	13	13	
		SO2	0.064	0.064	13	13	
		TRS	0.017	0.017	13	13	
SULFOX-CT	Sulfox Cooling Tower	PM/PM2.5/PM10	0.04	0.18			
		VOC	0.43	1.89	4, 14	4, 14	4
SULFOX-INH	Bag Filter	PM/PM2.5/PM10	0.08	0.01			
SULFOX-TO	Thermal Oxidizer	CO (8)	32.70	70.52	19, 24, 25, 27, 40	7, 19, 24, 25, 27, 40	19, 25
		NOx (8)	16.16	70.66	19, 25, 27, 40	7, 19, 25, 27, 40	19, 25
		PM/PM2.5/PM10	5.71	25.01	19, 40	7, 19, 40	19
		SO2 (8)	23.66	13.93	19, 25, 27, 40	6, 7, 9, 19, 25, 27, 40	19, 25
		SO2 (8)(10)	100.00		19, 25, 27, 40	6, 7, 9, 19, 25, 27, 40	19, 25
		TRS	0.02	0.01	40, 42	6, 7, 40, 42	
		VOC	6.66	15.26	19, 24, 40, 42	6, 7, 9, 19, 24, 40, 42	19
WWTP	Wastewater Treatment Plant	H2S	0.05	0.20			
		VOC	0.12	0.50			
X-426A	Steam Boiler (15.8 MMBtu/hr)	CO	1.33	5.81			
		NOx	2.05	9.00	4	4	4
		PM/PM2.5/PM10	0.12	0.53			
		SO2	0.01	0.04	2, 4	2, 4	4
		VOC	0.09	0.38			
X-426B	Steam Boiler (15.8 MMBtu/hr)	CO	1.33	5.81			
		NOx	2.05	9.00	4	4	4
		PM/PM2.5/PM10	0.12	0.53			
		SO2	0.01	0.04	2, 4	2, 4	4
		VOC	0.09	0.38			

**Major NSR Summary Table**

<b>Permit Number: 865A and PSDTX1016M1</b>			<b>Issuance Date: July 15, 2015</b>				
<b>Emission Point No. (1)</b>	<b>Source Name (2)</b>	<b>Air Contaminant Name (3)</b>	<b>Emission Rates</b>		<b>Monitoring and Testing Requirements</b>	<b>Recordkeeping Requirements</b>	<b>Reporting Requirements</b>
			<b>lb/hr</b>	<b>TPY(4)</b>	<b>Spec. Cond.</b>	<b>Spec. Cond.</b>	<b>Spec. Cond.</b>
ACRO-Fug	Acrolein Process Fugitives (5)	VOC	0.19	0.85	4, 17, 18, 20, 29	4, 7, 17, 18, 29, 32	4
ACRO-TksFug	Acrolein Storage Tanks Fugitives (5)	VOC	0.01	0.05	4, 17, 18, 29, 39, 40	4, 7, 17, 18, 29, 32, 39, 40	4
ACRO-WWFug	Acrolein Wastewater Fugitives (5)	VOC	0.01	0.01	4, 17, 18, 29, 40	4, 7, 17, 18, 29, 32, 40	4
BMT-1E/T	Train 1 – EtSH or TBM Production Fugitives (5)(6)	H2S	0.03	0.13	16	7, 16	
		TRS	0.01	0.01	16	7, 16	
		VOC	1.24	0.16	4, 15, 16	4, 7, 15, 16	4
BMT-1M	Train 1 – MeSH Production Fugitives (5)(6)	H2S	0.03	0.13	16	7, 16	
		TRS	0.02	0.07	16	7, 16	
		VOC	0.99	0.28	4, 15, 16	4, 7, 15, 16	4
BMT-2M	Train 2 – MeSH Production Fugitives (5)	H2S	0.01	0.05	16	7, 16	
		TRS	0.02	0.09	16	7, 16	
		VOC	0.08	0.33	4, 15, 16	4, 7, 15, 16	4
DMDS	Dimethyl Disulfide Area Process Fugitives (5)	TRS	0.06	0.24	16	7, 16	
		VOC	0.06	0.24	4, 15, 16	4, 7, 15, 16	4
DMS	Dimethyl Sulfide Area Process Fugitives (5)	TRS	0.02	0.10	16	7, 16	
		VOC	0.02	0.10	4, 15, 16	4, 7, 15, 16	4
DMS Retro - Fug	DMS Retrofit Process Fugitives (5)	VOC	0.01	0.01	4, 15, 16	4, 7, 15, 16	4
		H2S	0.01	0.01	16	7, 16	
		TRS	0.01	0.02	16	7, 16	
F-1	H2S Plant Process Fugitives (5)	H2S	0.01	0.01	16	7, 16	
		TRS	0.01	0.01	16	7, 16	
		VOC	0.01	0.01	4, 15, 16	4, 7, 15, 16	4
Flare Fug	Flare Area Fugitives (5)	VOC	0.01	0.01	4, 15, 41	4, 7, 15, 41	4
Fug-Incin	Incinerator Process Fugitives (5)	H2S	0.01	0.01	16	7, 16	
		VOC	0.01	0.01	4, 15, 16	4, 7, 15, 16	4
MMP-Fug	MMP Process Area Fugitives (5)	VOC	0.01	0.06	4, 16, 17, 18	4, 7, 16, 17, 18	4
MMPRC-Fug	MMP Railcar Loading Area Process Fugitives (5)	VOC	0.04	0.15	4, 16, 17, 18	4, 7, 16, 17, 18	4

**Major NSR Summary Table**

<b>Permit Number: 865A and PSDTX1016M1</b>			<b>Issuance Date: July 15, 2015</b>				
<b>Emission Point No. (1)</b>	<b>Source Name (2)</b>	<b>Air Contaminant Name (3)</b>	<b>Emission Rates</b>		<b>Monitoring and Testing Requirements</b>	<b>Recordkeeping Requirements</b>	<b>Reporting Requirements</b>
			<b>lb/hr</b>	<b>TPY(4)</b>	<b>Spec. Cond.</b>	<b>Spec. Cond.</b>	<b>Spec. Cond.</b>
MMPtk-Fug	MMP Storage Area Process Fugitives (5)	VOC	0.01	0.02	4, 16, 17, 18	4, 7, 16, 17, 18	4
PR-Tower	Product Recovery Tower Fugitives (5)	H2S	0.01	0.01	16	7, 16	
		TRS	0.01	0.01	16	7, 16	
		VOC	0.02	0.10	4, 15, 16	4, 7, 15, 16	4
RCSHIP	Railcar Loading/Unloading Fugitives (5)	TRS	0.03	0.11	16	7, 16	
		VOC	0.03	0.11	4, 11, 15, 16	4, 7, 11, 15, 16	4
RUNDOWN	Rudown Tank Fugitives (5)	H2S	0.01	0.01	16, 40	7, 16, 40	
		TRS	0.11	0.46	16, 40	7, 16, 40	
		VOC	0.11	0.46	4, 15, 16, 40	4, 7, 15, 16, 40	4
STORAGE	Storage Tanks Fugitives (5)	TRS	0.15	0.64	16, 37, 38, 40	7, 16, 37, 38, 40	37
		VOC	0.16	0.69	4, 15, 16, 37, 38, 40	4, 7, 15, 16, 37, 38, 40	4, 37
SulfoxChlr	Sulfox Chiller System (5)	HCFC	0.01	0.01	4	4	4
SWS	Sour Water Strippers Fugitives (5)	H2S	0.01	0.01	16	7, 16	
		TRS	0.01	0.01	16	7, 16	
		VOC	0.01	0.01	15, 16	7, 15, 16	
TO-Fug	Thermal Oxidizer Process Fugitives (5)	VOC	0.01	0.01	4, 17, 18, 42	4, 7, 17, 18, 42	4
TTSHIP	Tank Truck Loading/Unloading Fugitives (5)	TRS	0.03	0.11	16	7, 16	
		VOC	0.03	0.11	4, 11, 15, 16	4, 7, 11, 15, 16	4

Footnotes:

- (1) Emissions Point identification – either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3)
  - CO - carbon monoxide
  - NO<sub>x</sub> - total oxides of nitrogen
  - PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>.
  - PM<sub>10</sub> - particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>.
  - PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter.
  - SO<sub>2</sub> - sulfur dioxide
  - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code 101.1
  - NaOH - sodium hydroxide
  - H<sub>2</sub>SO<sub>4</sub> - sulfuric acid
  - H<sub>2</sub>S - hydrogen sulfide
  - TRS - total reduced sulfur, includes H<sub>2</sub>S and sulfur bearing VOC, excludes SO<sub>2</sub>
  - MeSH – methyl mercaptan
  - EtSH – ethyl mercaptan
  - TBM – tert-butyl mercaptan
  - DMS – dimethyl sulfide
  - MMP - methylmercaptopropionaldehyde
  - HCFC - hydrochlorofluorocarbons
  - MSS – planned maintenance, startup and shutdown activities
- (4) Compliance with annual emissions limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) The BMT-1 Unit can produce either methyl mercaptan, ethyl mercaptan, or tert-butyl mercaptan. Therefore, emissions from EPNs, BMT-1M and BMT-1E/T do not occur simultaneously.
- (7) Common exhaust stack.
- (8) PSDTX1016 pollutant.
- (9) Includes up to 416 hours per calendar year operation as the backup control device for EPN Sulfox-TO when it is not operating and 416 hours per calendar year for EPN INCIN when it is not operating.
- (10) Planned startup, shutdown and maintenance activity emissions.
- (11) The current allowable rates until all the amendment modifications are started up, per Special Condition 43.
- (12) The allowable rates after the amendment modifications are started up, per Special Condition 43.
- (13) Allowable Flare short term rate during MSS activities.
- (14) Allowable Flare short term rate during high flow events, limited to 100 hours per year.



**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
AIR QUALITY PERMIT**



*A Permit Is Hereby Issued To  
**Arkema Inc.***

*Authorizing the Continued Operation of  
**Organic Chemical Manufacturing Facility**  
Located at **Beaumont, Jefferson County, Texas**  
Latitude 30° 03' 33" Longitude 094° 03' 25"*

Permit: 865A/PSDTX1016M1

Issuance Date : July 15, 2015

Expiration Date: July 15, 2025

For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code 116.116 (30 TAC 116.116)]
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC 116.120(a), (b) and (c)]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC 116.115(b)(2)(B)(iii)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC 116.115(b)(2)(D)]
7. **Recordkeeping.** 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. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission 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. [30 TAC 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC 116.115(b)(2)(F)]
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with 30 TAC 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in Texas Health and Safety Code (THSC) 382.003(3) or violate THSC 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

### Operating Standards

1. Sulfur Heaters H-401 and H-501, Methane Heaters H-402 and H-502 shall be equipped with low-nitrogen oxides (NO<sub>x</sub>) technology that shall not exceed 0.10 pound (lb) of NO<sub>x</sub>/MMBtu (million British thermal units) of natural gas fired. Steam Boilers X-426A and X-426B shall be equipped with burners that shall not exceed 0.13 lb of NO<sub>x</sub>/MMBtu of natural gas fired.
2. Fuel gas combusted in each combustion emission point number (EPN) in this permit shall be sweet natural gas containing no more than five grains of total sulfur per 100 dry standard cubic feet. The owner or operator of this facility shall demonstrate compliance with this permit condition by annually obtaining documentation of the natural gas fuel sulfur content from the natural gas provider or analyzing the sulfur content of the natural gas fuel. The records shall be kept at the site for a period of two years and made available to the Texas Commission on Environmental Quality (TCEQ) or designated representative upon request.
3. 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 conditions specified in this permit.

### Federal Applicability

4. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on New Source Performance Standards (NSPS) promulgated for the following:
  - A. Volatile Organic Liquid Storage Vessels in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Subparts A and Kb;
  - B. Equipment Leaks of Volatile Organic Compounds (VOC) in Synthetic Organic Chemical Manufacturing Industry (SOCMI) in 40 CFR Part 60, Subparts A and VV; and
  - C. Emissions from SOCMI Air Oxidation Unit Processes in 40 CFR Part 60, Subparts A and III.

These facilities shall also comply with all applicable requirements of EPA regulations on Control Device Requirements in 40 CFR §§ 60.18 and 63.11.

5. The facilities shall comply with all applicable requirements of Title 30 Texas Administrative Code §§ 113.110 (30 TAC §§ 113.110), 113.120, and 113.130,

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 2

including the referenced requirements contained in 40 CFR Part 63, Subparts A, F, G, and H.

### Operational Limits

6. The hydrogen sulfide (H<sub>2</sub>S) plant shall operate at capacities where the total H<sub>2</sub>S production is consumed on-site.

Sulfox process units shall never operate unless the Sulfox Thermal Oxidizer (EPN Sulfox-TO) is properly operating. When the Sulfox Thermal Oxidizer fails to operate, the Sulfox process units shall be shut down in an orderly manner. The shutdown process shall be documented and kept at the plant site. The acrolein reactor shall automatically shut down when the Sulfox Thermal Oxidizer shuts down.

The Sulfox Thermal Oxidizer (EPN Sulfox-TO) operation is limited to 735 hours per calendar year in startup, shutdown, and maintenance service. Start-up, shutdown, and maintenance events for the Sulfox process unit shall be recorded upon each occurrence. The data recorded shall be each start-up, shutdown, and maintenance event and the estimated pounds an hour of total reduced sulfur (TRS), sulfur dioxide (SO<sub>2</sub>), and VOC emitted from EPN Sulfox-TO; and this data will be compared to the confidential May 2007 submittal and subsequent updates to verify these representations are met. Records shall be kept at the plant site of each startup, shutdown, and maintenance event for the last two years; and these records shall be made immediately available to EPA and TCEQ personnel upon request. **(PSD)**

7. Production of acrolein and methylmercaptopropionaldehyde (MMP), tertiary butyl mercaptan (TBM), dimethyl disulfide (DMDS), dimethyl sulfide (DMS), hydrogen sulfide (H<sub>2</sub>S), ethyl mercaptan (EtSH) and methyl mercaptan (MeSH) shall be limited to the amounts specified in the confidential section of the amendment application initiated by letter dated January 14, 2013. The site will maintain monthly records of daily and rolling 12 month production of each product. **(PSD)**
8. Storage Tank Nos. D-307 and D-2307 shall be limited to an annual methanol throughput specified in the confidential section of the application submitted on May 2007. The site will maintain monthly records of annual throughput of each tank. The throughput of each tank shall be tabulated on a 12-month rolling basis.
9. A. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the maximum allowable

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 3

emission rates table (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.

The wastewater treatment tanks shall vent to the Sulfox Thermal Oxidizer (EPN Sulfox-TO) under normal operations, and it shall vent to the Flare (EPN FLARE) in an emergency. Only one wastewater vaporizer shall operate at any one time. The thermal oxidizer shall operate with no less than 99.9 percent efficiency in destroying the VOC sent to it or at a VOC outlet concentration of 10 parts per million by volume (ppmv), and the flare shall operate with no less than 98 percent efficiency in destroying the VOC sent to it. Any other exception to this condition requires prior review and approval by the TCEQ Executive Director, and such exceptions may be subject to strict monitoring requirements. **(PSD)**

- B. The continuous gaseous flow from the overhead vent from the product recovery tower (PRT), continuous gaseous flow from the overhead vent from the hydrogen sulfide splitter towers, and intermittent venting from the pressure control valve on the ethyl mercaptan spheres shall vent to the Thermal Incinerator (EPN INCIN). In the event that the Incinerator (EPN INCIN) is not operable, the Flare (EPN FLARE) will serve as a temporary backup for no more than 416 hours per calendar year. **(PSD)**
- C. Waste streams from the Sulfox units shall be routed to the Sulfox Thermal Oxidizer (EPN Sulfox-TO). The Thermal Oxidizer (EPN Sulfox-TO) shall destroy the VOC streams sent to it at a minimum of 99.9 percent or at a VOC outlet concentration of 10 parts per million by volume (ppmv). **(PSD)**
- D. The Thermal Incinerator (EPN INCIN) shall destroy VOC waste gas at a minimum of 99.9 percent or have a VOC outlet concentration of 10 parts per million by weight or less.
- E. Waste gas streams from the Sulfox unit vents cannot go to EPN FLARE and EPN Sulfox-TO at the same time. Documentation shall be kept at the plant site demonstrating compliance with this special condition on a rolling two-year basis, and these records shall be made immediately available to EPA and TCEQ personnel upon request. **(PSD)**
- F. The acrolein storage tanks shall be operated at a temperature less than 100°F. Hydroquinone or similar inhibitor will be added to the acrolein prior to its storage in these tanks.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 4

10. A. The flare systems shall be designed such that the combined assist natural gas and waste stream to each flare meets the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal, upset, and maintenance flow conditions.

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 flares 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.
- C. The flares shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours.
- D. The permit holder shall install a continuous flow monitor and a composition analyzer that provide a record of the vent stream flow and composition 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 shall be recorded each hour.

The monitors shall be calibrated on an annual basis to meet the following accuracy specifications: the flow monitor shall be  $\pm 5.0$  percent, temperature monitor shall be  $\pm 2.0$  percent at absolute temperature, and pressure monitor shall be  $\pm 5.0$  mm Hg;

Calibration of the analyzer shall follow the procedures and requirements of Section 10.0 of 40 CFR Part 60, Appendix B, Performance Specification 9, as amended through October 17, 2000, (65 FR 61744), except that the multi-point calibration procedure in Section 10.1 of Performance Specification 9 shall be performed at least once every calendar quarter instead of once every month, and the mid-level calibration check procedure in Section 10.2 of Performance Specification 9 shall be performed at least once every calendar week instead of once every 24 hours. The calibration gases used for

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 5

calibration procedures shall be in accordance with Section 7.1 of Performance Specification 9. Net heating value of the gas combusted in the flare shall be calculated according to the equation given in 40 CFR § 60.18(f)(3) as amended through October 17, 2000, (65 FR 61744).

The monitors and analyzers shall operate as required by this section at least 95 percent 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)(4) shall be recorded at least once every 15 minutes. Hourly mass emission rates shall be determined and recorded using the above readings and the emission factors used in the permit amendment application May 27, 2007. **(PSD)**

- E. Hourly SO<sub>2</sub> and TRS emissions shall be calculated based on operational data. These shall be compared to the lb/hr and ton per year values on the maximum available emission rates table (MAERT).
  - F. The Flare (EPN FLARE) shall only operate 416 hours per calendar year as the emergency backup control device only when the Sulfox Thermal Oxidizer (EPN Sulfox-TO) is not operating. The data recorded shall be each emergency event and the estimated pounds an hour of TRS, SO<sub>2</sub>, and VOC emitted from EPN FLARE when the Sulfox unit is not operating, and this data will be compared to the confidential May 27 2007 submittal and subsequent updates to verify these representations are met. Records shall be kept at the plant site for the last two years demonstrating compliance with this requirement.
11. Loading operations are subject to the following limits:
- A. All loading lines shall be inspected visually for possible leak sites before the start of any loading operations. Damaged hoses shall be repaired or replaced before any loading operations commence. Upon completion of loading operations, all loading lines (except for MMP) shall be purged with inert gas to the flare before any connections between the loading racks and loaded vessels are broken.
  - B. The MMP will be loaded into railcars. The MMP railcar loading will use closed loop vapor-balance systems connected to the MMP Storage Tank or the Sulfox Thermal Oxidizer (EPN Sulfox-TO). Upon completion of MMP loading operations, the loading line will be purged into the railcar or the MMP storage tank. When unhooking the railcar from the loading line, an acetic acid or equivalent wash will be done after each MMP loading. The wash material will

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 6

- be neutralized and sent off-site for disposal. The wash material tank will vent to the Sulfox Thermal Oxidizer (EPN Sulfox-TO).
- C. The MMP day storage tanks will vent to the Sulfox Thermal Oxidizer (EPN Sulfox-TO). Under no circumstances shall the MMP day storage tanks and bulk storage tank vent to the atmosphere.
- D. Acetic acid and pyridine catalyst tank vents shall be controlled by the Sulfox Thermal Oxidizer (EPN Sulfox-TO). Carbon disulfide, methanol, and isobutylene railcar loading and unloading vents shall be controlled by the Flare (EPN FLARE).
12. Emissions from any VOC water separation equipment shall be vented to a permitted control device or recycled to the process.
13. The H<sub>2</sub>S concentration in the vapor space of the molten sulfur storage tanks shall not exceed 250 ppmv. The tank vapors shall be sampled and analyzed for H<sub>2</sub>S at least once quarterly during loading activities. If any scheduled analysis indicates an exceedance of this limit, material transfers to the tank shall be reduced until additional sampling, to be conducted at least every eight hours, indicates that the H<sub>2</sub>S concentration is below 250 ppmv. Records shall be maintained of all analyses and corrective actions for two years and shall be made available to the TCEQ Executive Director or designated representative upon request.
14. The cooling tower water (EPN Sulfox-CT) shall be monitored for VOC monthly with an approved air stripping system or equivalent. The appropriate equipment shall be maintained so as to minimize fugitive VOC emissions from the cooling tower. 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. The results of the monitoring and maintenance efforts shall be recorded, and such records shall be maintained for a period of two years. The records shall be made available to the TCEQ Executive Director upon request. The cooling tower (EPN Sulfox-CT) shall be equipped with drift eliminators to minimize water mist related particulate matter losses.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 7

15. Piping, Valves, Connectors, Pumps, and Compressors in VOC Service - 28VHP-  
(see Special Condition No. 17 for the Sulfox Unit)

Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment.

- A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pound per square inch, absolute (psia) at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi [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 (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.
- 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. Flanges 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

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 8

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 flanges found to be emitting VOC in excess of 500 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 until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. The TCEQ Executive Director, at her discretion, may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown.
- J. The results of the required fugitive monitoring and maintenance program shall be made available to the TCEQ Executive Director or designated

SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 9

representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, and corrective actions taken for all components. Records of flange 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.

16. Piping, Valves, Pumps, and Compressors in MMP and TRS Compound Service

- A. Audio, olfactory, and visual checks for leaks of compounds identified in Special Condition No. 16C within the operating area shall be made every 12 hours. The date and time of each check shall be recorded.
- B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take the following actions in the order listed:
  - (1) Isolate the leak.
  - (2) Commence repair or replacement of the leaking component.
  - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Records shall be maintained at the plant site of all inspections, repairs, and replacements made including the date the inspection, repair, or replacement was completed. The records shall be maintained for two years and shall be made available to the TCEQ Executive Director or designated representative upon request.

- C. This condition replaces Special Condition No. 15 for components containing 10 percent by weight or more of the following compounds:

<u>Compound Name</u>	<u>Formula</u>
Carbon Disulfide	CS <sub>2</sub>
Chemical Plant Waste Mixtures	C <sub>3</sub> and C <sub>4</sub>
Diethyl Sulfide (DES)	(C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> SH
Dimethyl Disulfide	(CH <sub>3</sub> ) <sub>2</sub> (SH) <sub>2</sub>

SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 10

<u>Compound Name</u>	<u>Formula</u>
Dimethyl Sulfide	$(\text{CH}_3)_2\text{SH}$
Ethyl Mercaptan	$\text{C}_2\text{H}_5\text{SH}$
Hydrogen Sulfide	$\text{H}_2\text{S}$
Methyl Mercaptan	$\text{CH}_3\text{SH}$
Methylmercaptopropionaldehyde	$\text{C}_4\text{H}_8\text{OS}$
Tertiary Butyl Mercaptan	$(\text{CH}_3)_2\text{CSH}(\text{C}_2\text{H}_5)$

17. Piping, Valves, Connectors, Pumps, and Compressors in VOC Service - Intensive Directed Maintenance - 28MID - to be used at the Sulfox Unit

- 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 68F 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 to be made available upon request.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable ANSI, API, ASME, 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.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 11

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program. 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).

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

- G. All new and replacement pumps and compressors shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. These seal systems need not be monitored and may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

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

- H. Damaged or leaking valves, connectors, compressor seals, and pump seals found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. 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 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

SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 12

may be required based on the number and severity of tagged leaks awaiting shutdown.

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

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

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

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

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

Where:

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

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

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

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

- K. 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.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 13

- 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.
- M. This special condition only applies to the Sulfox process unit and Special Condition No. 15 does not apply to the Sulfox process unit.

### 18. Sulfox Unit Annual Flange Monitoring - 28 CNTA

In addition to the weekly physical inspection required by Item E of Special Condition No. 17, all connectors in gas/vapor and light liquid service shall be monitored annually with an approved gas analyzer in accordance with Items F through J of Special Condition No. 17. Alternative monitoring frequency schedules of 40 CFR Part 63, Subpart H, National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks, may be used in lieu of the monitoring frequency required by this permit condition. Compliance with this condition does not assure compliance with requirements of applicable state or federal regulation and does not constitute approval of alternative standards for these regulations.

### Initial Demonstration of Compliance

- 19. The holder of this permit shall perform an initial compliance test of the new Thermal Oxidizer (EPN Sulfox-TO), existing Thermal Incinerator (EPN INCIN), and the existing Flare (EPN FLARE). The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. **(PSD)**
  - A. The appropriate TCEQ Regional Office shall be contacted as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting. The initial pretest meeting for the flare may be scheduled within 30 to 60 days of issuance of the permit in order to expedite testing.

The notice shall include:

- (1) 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.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 14

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.

A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The appropriate TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

Test waivers and alternate/equivalent procedure proposals for NSPS testing which must have EPA approval shall be submitted to the TCEQ Regional Director.

- B. Sampling for the flare shall occur within 60 days after initial startup of the facilities or issuance of a permit for existing facilities. Sampling for the Thermal Oxidizer (EPN Sulfox-TO) should occur within 60 days after initial start-up of the Sulfox unit, but not later than 180 days and at such other times as may be required by the Executive Director of the TCEQ. Sampling of the Thermal Incinerator (EPN INCIN) shall occur within 60 days after approval of the December 2002 permit amendment, but not later than 180 days and at such other times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the appropriate TCEQ Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 61 requires EPA approval, and requests shall be submitted to the TCEQ Regional Office. **(PSD)**
- C. The test plan shall be designed to demonstrate that the flare can comply with the provisions of 40 CFR § 60.18.
- D. Air contaminants emitted from the Sulfox Thermal Oxidizer (EPN Sulfox-TO) to be tested for include (but are not limited to) carbon monoxide (CO), NO<sub>x</sub>, particulate matter equal to or less than ten microns in diameter (PM<sub>10</sub>), SO<sub>2</sub>, and VOC. Sampling shall be used to demonstrate compliance with the steady state pound an hour MAERT limits and the gaseous and atomized liquid VOC destruction and removal efficiency listed in Special Condition No. 9C. The plant shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of production rate and combustor operating parameters shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. **(PSD)**

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 15

- E. Air contaminants emitted from the Thermal Incinerator (EPN INCIN) to be tested for include (but are not limited to) CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, and VOC. Sampling shall be used to demonstrate compliance with the pound an hour MAERT limits and the VOC destruction and removal efficiency listed in Special Condition No. 9D.
- F. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the EPA Region 6 New Source Review Section in Dallas;

One copy to the appropriate TCEQ Regional Office.

- 20. Compliance testing of EPN FLARE shall be conducted annually in accordance with Special Condition No. 19A and C. The test plan shall be designed to demonstrate that the flare can comply with the provisions of 40 CFR § 60.18. A pretest meeting per Special Condition No. 19A is not required for each annual test unless a pretest meeting is requested by the appropriate TCEQ Regional Office.

In place of performing the annual test for exit velocity and heating value as described above, the permit holder may install and operate an online Btu analyzer to determine the net heating value of the gas which is combusted in the flare and calculate exit velocity from flow data. However, annual testing is still required to show compliance with all other aspects of 40 CFR § 60.18.

### Miscellaneous Requirements

- 21. In the event the flare shuts down for maintenance purposes during a plant shutdown, a temporary flare meeting the requirements of Special Condition No. 10 shall be installed in a location near the existing flare. The temporary flare shall be operated during the time the flare is shut down.
- 22. Within 180 days of start-up of the new or modified equipment, the holder of this permit shall submit to the appropriate TCEQ Regional Director, or a representative, documentation which demonstrates that operations covered by this permit are achieving compliance with all permit conditions and significant emissions control representations in the application. Compliance may be demonstrated through recordkeeping, testing, calculations, or other applicable methods.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 16

### Thermal Units

23. The Incinerator (EPN INCIN) shall be operated with not less than 4 percent oxygen (O<sub>2</sub>) when combusting waste vapor. The EPN INCIN minimum incinerator firebox exit temperature shall not be less than 1380°F (when combusting waste vapor). The flow meter, analyzers, and data recorders are allowed downtime for a maximum of 5 percent of the year based on a rolling 12-month period. During periods of flow monitor or analyzers downtime, recorded data shall not be used in data averages and calculations. Each firebox exit temperature and percent O<sub>2</sub> shall be continuously monitored and recorded. The values can be changed based on stack sampling results demonstrating compliance with the percent destruction and removal efficiency or VOC outlet concentration. This representation shall be noted in a letter to the permit file in Austin and the nearest TCEQ Regional Office. **(PSD)**
24. The Sulfox Thermal Oxidizer (EPN Sulfox-TO ) shall maintain the VOC concentration in the exhaust gas less than 10 ppmv on a dry basis, corrected to 3 percent O<sub>2</sub>, or achieve a VOC destruction efficiency greater than 99.9 percent.

The thermal oxidizer firebox exit temperature shall be maintained at not less than 1650°F and exhaust oxygen concentration not less than 2 percent when combusting waste vapor and partially atomized wastewater.

The thermal oxidizer 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 ±0.75 percent of the temperature being measured expressed in degrees Celsius or ±2.5°C.

Quality-assured (or valid) data must be generated when the thermal oxidizer is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the thermal oxidizer operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. **(PSD)**

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 17

25. The holder of this permit shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of CO, NO<sub>x</sub>, SO<sub>2</sub>, and O<sub>2</sub> from EPN Sulfox-TO.
  - A. Each 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 Specifications No. 1 through 9, 40 CFR Part 60, Appendix B. For CO monitor certification, calibration error testing as specified by the TCEQ shall be performed. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ in Austin 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  $\pm 15$  per cent accuracy indicate that the CEMS is out of control.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 18

- C. The monitoring data shall be reduced to hourly averages concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of lb/hr at least once every week as follows:

The measured hourly average concentration from the CEMS shall be multiplied by the exhaust gas flow rate of the source measured during the latest stack test performed in accordance with Special Condition No. 19.

- 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 facility generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the facility generating emissions 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. **(PSD)**
26. The holder of this permit shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of CO and O<sub>2</sub> from the Incinerator (EPN INCIN). **(PSD)**
- A. Each 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 Specifications No. 1 through 9, 40 CFR Part 60, Appendix B. For CO monitor certification, calibration error testing as specified by the TCEQ shall be performed. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ in Austin for requirements to be met.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 19

- B. Each system shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts 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, unless the monitor is required by a subpart of Standards of Performance for New Stationary Sources or NESHAPS, in which case zero and span shall be done daily without exception.

Each calendar quarter, monitor accuracy shall be certified using a cylinder gas audit (CGA) as described in 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.2 or by an equivalent method approved by the TCEQ. Reference method testing can be substituted for CGAs if preferred by the holder of this permit. Corrective action shall be taken when the CGA exceeds  $\pm 15$  percent accuracy.

- C. The monitoring data collected shall be reduced to hourly average concentrations at least once every week, using a minimum of four equally-spaced data points over each one-hour period for each CEMS. The individual average concentrations of each monitored pollutant shall be reduced to units of the permit allowable emission rates in lb/hr.
- D. All monitoring data and quality-assurance data shall be maintained by the source for a period of two years at the plant site and shall be made available to the TCEQ Executive Director or designated representative upon request. The data from each CEMS may be used to determine compliance with the conditions of this permit.
- E. All CGA exceedances of  $\pm 15$  percent accuracy and any CEMS downtime shall be reported to the appropriate TCEQ Regional Director. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
- F. The flow meter, analyzers, and data recorders are allowed downtime for a maximum of 5 percent of the year based on a rolling 12-month period. During periods of flow monitor or analyzer downtime, recorded data shall not be used in data averages and calculations.
27. The holder of this permit shall keep daily records of the flow rate of each combustion source's (EPN INCIN and Sulfox-TO) inlet waste streams. This information along with each combustion source's operating parameters (i.e., firebox temperature and in-stack O<sub>2</sub>, CO, NO<sub>x</sub>, and SO<sub>2</sub> concentrations for EPN Sulfox-TO) may be used to determine whether compliance with the maximum allowable emission rate limits are being achieved.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 20

### Special 30 TAC Chapter 112 Requirement

28. When the distributive control system enunciates that EPN FLARE SO<sub>2</sub> emissions exceed 5,193 lb/hr, the following measures shall be taken as appropriate to control to the extent practicable SO<sub>2</sub> impacts at the CAMS 1050 monitor.
- A. Plant personnel shall evaluate all relevant meteorological conditions to determine whether additional SO<sub>2</sub> emissions from EPN FLARE would likely result in increased SO<sub>2</sub> impacts in the vicinity of the CAMS 1050 monitor.
  - B. Plant personnel shall evaluate ambient air quality data provided by the CAMS 1050 monitor to determine if current SO<sub>2</sub> concentrations are greater than 160 parts per billion (ppb).
  - C. If it is determined, based upon all relevant meteorological conditions, that additional SO<sub>2</sub> emissions from EPN FLARE would likely result in increased SO<sub>2</sub> impacts from the EPN FLARE at the CAMS 1050 monitor, and that impacts at the CAMS 1050 monitor are above 160 ppb, plant personnel shall curtail permitted activities, as appropriate, to reduce SO<sub>2</sub> emissions from EPN FLARE to the maximum extent practicable, but to at least at or below 5,193 lb/hr.

### Acrolein Operations

29. Process Piping, Valves, Pumps, and Compressors in Acrolein Service
- A. Audio, olfactory, and visual checks for acrolein leaks shall be made every 12 hours within the acrolein operating area. The date and time of each check shall be recorded.
  - B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take the following actions:
    - (1) Isolate the leak within eight hours;
    - (2) Commence repair or replacement of the leaking component within four hours; and,
    - (3) If immediate repair is not possible, a leak collection/containment system will be used to prevent the leak or the facility shall be shutdown until repair or replacement can be made. Containment can include the

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 21

adjustment of bolts, fittings, packing glands, and pump/compressor seals as appropriate to contain the leak.

Records shall be maintained of all leaks, repairs, and replacements made. These records shall be maintained for a period of two years at the plant site and shall be made immediately available at the request of TCEQ personnel.

30. The holder of this permit shall only store acrolein in Tank Nos. D-8501A, D-8501B, and D-8501C. The acrolein tanks shall be in a restricted access area from plant vehicles and personnel. Each acrolein storage tank is limited to a maximum storage temperature of 100°F at all times.
31. There shall be at least one operator on duty at all times when the acrolein unit is in operation.
32. All Sulfox unit operating personnel at these facilities shall be properly trained to recognize acrolein leaks. Records shall be kept which indicate the type of training given to the employees and the appropriate dates.
33. All acrolein storage vessels shall be equipped with a rupture disc upstream of the relief valves. A pressure gauge or equivalent 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 not later than the next scheduled acrolein storage tank maintenance outage. A spare parts inventory of rupture discs for the acrolein storage vessels shall be maintained at the site.
34. All acrolein storage vessels equipped with a rupture disc upstream of a relief valve shall be properly maintained and operated during operation of the acrolein storage vessels. Cleaning and maintenance of the rupture disc and relief valves shall be performed as recommended by the manufacturer and as necessary so that the equipment efficiency can be adequately maintained.
35. The holder of this permit shall maintain a complete emergency response plan at the plant site which describes the course of action to be taken by their chemical personnel in the event that an acrolein upset or a severe acrolein leak occurs. This plan shall include the steps to minimize the situation by acrolein ground level foam and/or water mitigation methods, procedures for notification of the proper civil authorities, any potentially-affected residences, and any other appropriate organizations.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 22

36. Under no circumstances shall the acrolein storage tanks be allowed to vent to the atmosphere.

### Roof Landings

37. This permit authorizes emissions from storage tanks D-307 and D-2307 for two planned floating roof landings per year per tank. Tank roof landings include all operations when the floating roof is on its supporting legs. The emissions from these activities are subject to the maximum allowable emission rates indicated on the MAERT. The occurrence of each roof landing and the associated emissions shall be recorded and the rolling 12-month tank roof landing emissions shall be updated on a monthly basis. These records shall include at least the following information:
- A. The identification of the tank and emission point number, and any control devices used to reduce emissions;
  - B. The reason for the tank roof landing;
  - C. The date and time of each of the following events:
    - (1) the tank roof was initially landed,
    - (2) all liquid was pumped from the tank to the extent possible,
    - (3) all standing liquid was removed from the tank,
    - (4) tank refilling commenced, and
    - (5) tank roof off supporting legs, floating on liquid.
  - D. The estimated quantity of each air contaminant, or mixture of air contaminants emitted, with the data and methods used to determine it. The emissions associated with roof landing activities shall be calculated using the methods described in American Petroleum Institute's (API) Technical Report 2567 titled "Evaporative Loss from Storage Tank Floating Roof Landings" dated April 2005 or Section 7.1.3.2 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids."
38. Any gas or vapor removed from the vapor space under the floating roof must be routed to an industrial air filter or portable incinerator that achieves a 98 percent VOC removal if the cumulative contaminant partial pressure is greater than 0.50 psia at storage conditions or 95°F. Control must be maintained until the VOC concentration is less than 34,000 ppmv as methane. The locations and identifiers of the vents and controlled exhaust stream shall be recorded. A vacuum or negative pressure in the vapor space under the floating roof shall be maintained to the

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 23

industrial air filter or portable incinerator during degassing and shall be documented by the placement of a measurement device on the vapor collection line immediately adjacent to the tank and recording of the vacuum or negative pressure every 15 minutes during de-gassing.

- A. The vapor space under the floating roof shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the industrial air filter or portable incinerator to the extent allowed by the storage tank design.
- B. Two volumes of purge gas equivalent to the volume of the vapor space under the floating roof must have passed through the control device, before the vent stream may be sampled to verify acceptable-VOC concentration prior to uncontrolled venting. The measurement of the two volumes of purge gas shall not include any make-up air introduced into the control device. The VOC sampling and analysis shall be performed using an instrument with a flame ionization detector (FID), or a TCEQ-approved alternative detector. The instrument/FID must meet all requirements specified in Section 8.1 of EPA Method 21 (40 CFR Part 60, Appendix A). Sampling shall be performed as follows:
  - (1) Immediately prior to performing sampling, the instrument/FID shall be calibrated with zero and span calibration gas mixtures. Zero gas shall be certified to contain between 0 and 10 ppmv total hydrocarbons. Span calibration gas shall be methane at a concentration within between 34,000 and 50,000 ppmv, and certified by the manufacturer to be  $\pm 2$  percent accurate. Calibration error for the zero and span calibration gas checks must be less than 5 percent of the span calibration gas value before sampling may be conducted. The results of these checks shall be recorded.
  - (2) The sampling point shall be upstream of the inlet to the industrial air filter or portable incinerator. 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.
  - (3) 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 1-minute averages. The highest 1-minute average measured VOC

SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 24

concentration shall not exceed 34,000 ppmv as methane prior to uncontrolled venting.

- C. The combined pumping rate of methanol during refloating of the roof shall not exceed 4,000 gallons per hour.

Control of Tank Landings

39. If a Carbon Adsorption System (CAS) is used to control emissions from tank degassing, it shall comply with the following requirements:

- A. The CAS shall consist of a carbon canister with adequate carbon supply for the emission control operation.
- B. The CAS shall be sampled and recorded at least once every hour of CAS run time to determine breakthrough of the VOC. Sampling shall be done during tank degassing.
- C. The method of VOC sampling and analysis shall be by flame ionization detector (FID), a portable gas monitor, or a Texas Commission on Environmental Quality (TCEQ) approved equivalent. On each day that sampling is required, the instrument/FID shall be calibrated prior to sampling with a certified gas mixture at less than 0 ppmv  $\pm$ 10 percent and at 20 ppmv  $\pm$ 10 percent.
- D. Breakthrough shall be defined as a measured VOC concentration of 100 ppmv. The emissions shall be switched from the spent canister to the fresh canister, if any as soon as the breakthrough was detected to continue the emission control activity or this operation has to be shut down so that the spent canister could be replaced with a fresh one before it could be resumed.
- E. Records of CAS monitoring shall include the following:
  - (1) Sample time and date.
  - (2) Monitoring results (ppmv).
  - (3) Canister replacement log.

40. If a thermal oxidizer is used to control emissions from tank degassing it shall comply with the following requirements:

- A. The thermal oxidizer firebox exit temperature shall be maintained at a temperature not less than 1400°F (minimum temperature for catalytic

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 25

oxidizer must be approved through permit for criteria) while waste gas is being fed into the oxidizer.

- B. The thermal oxidizer exhaust (or inlet for catalytic oxidizer) temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. The temperature measurements shall be made at intervals of six minutes or less and recorded 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  $\pm 2.5^{\circ}\text{C}$ . Up to 5 percent invalid monitoring data on a rolling 12-month basis is acceptable provided it is only generated when the monitor is broken down, out-of-control (producing inaccurate data); being repaired, having maintenance performed, or being calibrated. The data availability shall be calculated as the total operating minutes for which quality assured data was recorded divided by the total operating minutes.

The measurements missed shall be estimated using engineering judgment and the methods used recorded (monitoring inlet and outlet temperatures on a catalytic oxidizer allows the delta T to be tracked which can indicate significant potential problems with the catalyst but it is not sufficient to track catalyst activity).

### Capture System Requirements

41. The following requirements apply to capture systems for EPN FLARE.
- A. Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or
  - B. Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.
  - C. The control device shall not have a bypass.
  - D. If any of the above inspections is not satisfactory, the permit holder shall promptly take necessary corrective action.

## SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 26

42. The following requirements apply to capture systems for EPN INCIN and EPN Sulfox-TO.
- A. Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or
  - B. Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.
  - C. The bypass for the control device shall comply with either of the following requirements:
    - (1) Install a flow indicator that records and verifies zero flow at least once every 15 minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
    - (2) Once a month, inspect the valves, verifying the position of the valves and the condition of the car seals prevent flow out the bypass.

The Flare (EPN FLARE) shall only operate 416 hours per calendar year as the emergency backup control device when EPN Sulfox-TO is not operating as per Special Condition Nos. 9B and 10F.

A deviation shall be reported if the monitoring or inspections indicate bypass of the control device for more than 416 hours per calendar year.
  - D. If any of the above inspections is not satisfactory, the permit holder shall promptly take necessary corrective action.

### 2013 Amendment Modifications

43. The amendment modifications proposed in the application dated January 14, 2013, will modify H<sub>2</sub>S and mercaptan units and change the startup and shutdown procedures including the clearing procedures for changing between mercaptan types and also allow for an increase in the ethyl mercaptan production rate. The ethyl mercaptan production can increase and the Beaumont Regional office shall be given a written notice when the modifications are complete and the final flare allowable emission rates are in effect. The final emission rates will be considered to

SPECIAL CONDITIONS

Permit Numbers 865A and PSDTX1016M1

Page 27

be in effect no sooner than 180 days after mechanical completion of the project. This time period allows for the plant to cycle from MeSH to EtSH and back as needed to identify new operational parameters necessary. (*mechanical completion of the project was accomplished on April 1, 2015*)

Dated: July 15, 2015

Emission Sources - Maximum Allowable Emission Rates

Permit Number 865A and PSDTX1016M1

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
ColumnMain	Acrolein Unit Column/Filter	VOC	0.01	0.01
D307	Methanol Tank	VOC	2.32	0.22
	Methanol Tank (MSS)	VOC (10)	3.08	1.86
D2307	Methanol Tank	VOC	2.32	0.22
	Methanol Tank (MSS)	VOC (10)	3.08	1.86
D398	Gasoline Tank	VOC	4.56	0.22
D215	Diesel Tank	VOC	0.02	0.01
D399	Diesel Tank	VOC	0.02	0.01
D3191A	Diesel Tank	VOC	0.02	0.01
D3191B	Diesel Tank	VOC	0.02	0.01
D8540	Caustic Tank	NaOH	0.01	0.01
FLARE	Flare Interim Limits (9)(11)	CO (8)	629.45	81.93
		H2S	13.42	7.41
		H2S (13)	67.74	
		H2SO4	61.08	32.29
		NOx (8)	73.40	9.56
		SO2 (8)	3576.03	562.89
		SO2 (8) (13)	8779.58	
		TRS	54.26	15.11
		TRS (13)	188.71	
		VOC	41.26	9.04
		VOC (13)	124.31	

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
FLARE	Flare Final Limits both routine and MSS operation (9)(12)	CO (8)	193.54	74.35
		H2S	24.08	2.82
		H2SO4	7.21	31.57
		H2SO4 (14)	29.18	
		NOx (8)	22.56	8.67
		SO2 (8)	625.00	448.96
		SO2 (8) (14)	3065.51	
		TRS	37.52	8.84
		TRS (14)	92.52	
		VOC	49.38	6.63
		VOC (14)	70.32	
H202	Heat Transfer Fluid Heater (31 MMBtu/hr)	CO	2.59	11.32
		NOx	3.08	13.48
		PM	0.23	1.02
		PM10	0.23	1.02
		PM2.5	0.23	1.02
		SO2	0.02	0.08
		VOC	0.17	0.74
H401/H402	Sulfur Heater 401 & Methane Heater 402 (7)	CO	1.32	5.77
		NOx	1.61	7.04
		PM	0.11	0.52
		PM10	0.11	0.52
		PM2.5	0.11	0.52

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		SO2	0.01	0.05
		VOC	0.09	0.38
H501/H502	Sulfur Heater 501 & Methane Heater 502 (7)	CO	1.32	5.77
		NOx	1.61	7.04
		PM	0.11	0.52
		PM10	0.11	0.52
		PM2.5	0.11	0.52
		SO2	0.01	0.05
		VOC	0.09	0.38
H2202	Heat Transfer Fluid Heater (31 MMBtu/hr)	CO	2.59	11.32
		NOx	3.08	13.48
		PM	0.23	1.02
		PM10	0.23	1.02
		PM2.5	0.23	1.02
		SO2	0.02	0.08
		VOC	0.17	0.74
INCIN	Incinerator	CO	2.03	8.90
		H2S	0.10	0.42
		NOx	1.57	6.87
		PM	0.89	3.90
		PM10	0.89	3.90
		PM2.5	0.89	3.90
		SO2	139.00	78.00

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		VOC	0.37	1.48
		TRS	0.36	1.43
S-1	Sulfur Storage Tank	H <sub>2</sub> S	0.015	0.012
		SO <sub>2</sub>	0.055	0.044
		TRS	0.015	0.012
S-2	Sulfur Pit	H <sub>2</sub> S	0.015	0.012
		SO <sub>2</sub>	0.055	0.047
		TRS	0.015	0.012
S-3	Sulfur Truck	H <sub>2</sub> S	0.017	0.017
		SO <sub>2</sub>	0.064	0.064
		TRS	0.017	0.017
SULFOX-CT	Sulfox Cooling Tower	PM	0.04	0.18
		PM <sub>10</sub>	0.04	0.18
		PM <sub>2.5</sub>	0.04	0.18
		VOC	0.43	1.89
SULFOX-INH	Bagfilter	PM	0.08	0.01
		PM <sub>10</sub>	0.08	0.01
		PM <sub>2.5</sub>	0.08	0.01
SULFOX-TO	Thermal Oxidizer	CO (8)	32.70	70.52
		NO <sub>x</sub> (8)	16.16	70.66
		PM	5.71	25.01
		PM <sub>10</sub>	5.71	25.01
		PM <sub>2.5</sub>	5.71	25.01

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		SO <sub>2</sub> (8)	23.66	13.93
		SO <sub>2</sub> (8)(10)	100.00	
		TRS	0.02	0.01
		VOC	6.66	15.26
WWTP	Wastewater Treatment Plant	H <sub>2</sub> S	0.05	0.20
		VOC	0.12	0.50
X-426A	Steam Boiler (15.8 MMBtu/hr)	CO	1.33	5.81
		NO <sub>x</sub>	2.05	9.00
		PM	0.12	0.53
		PM <sub>10</sub>	0.12	0.53
		PM <sub>2.5</sub>	0.12	0.53
		SO <sub>2</sub>	0.01	0.04
		VOC	0.09	0.38
X-426B	Steam Boiler (15.8 MMBtu/hr)	CO	1.33	5.81
		NO <sub>x</sub>	2.05	9.00
		PM	0.12	0.53
		PM <sub>10</sub>	0.12	0.53
		PM <sub>2.5</sub>	0.12	0.53
		SO <sub>2</sub>	0.01	0.04
		VOC	0.09	0.38
ACRO-Fug	Acrolein Process Fugitives (5)	VOC	0.19	0.85
ACRO-TksFug	Acrolein Storage Tanks Fugitives (5)	VOC	0.01	0.05
ACRO-WWFug	Acrolein Wastewater Fugitives (5)	VOC	0.01	0.01

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
BMT-1E/T	Train 1 - EtSH or TBM Production Fugitives (5) (6)	H <sub>2</sub> S	0.03	0.13
		TRS	0.01	0.01
		VOC	1.24	0.16
BMT-1M	Train 1 - MeSH Production Fugitives (5) (6)	H <sub>2</sub> S	0.03	0.13
		TRS	0.02	0.07
		VOC	0.99	0.28
BMT-2M	Train 2 - MeSH Production Fugitives (5)	H <sub>2</sub> S	0.01	0.05
		TRS	0.02	0.09
		VOC	0.08	0.33
DMDS	Dimethyl Disulfide Area Process Fugitives (5)	TRS	0.06	0.24
		VOC	0.06	0.24
DMS	Dimethyl Sulfide Area Process Fugitives (5)	TRS	0.02	0.10
		VOC	0.02	0.10
DMS Retro-Fug	DMS Retrofit Process Fugitives (5)	VOC	0.01	0.01
		H <sub>2</sub> S	0.01	0.01
		TRS	0.01	0.02
F-1	H <sub>2</sub> S Plant Process Fugitives (5)	H <sub>2</sub> S	0.01	0.01
		TRS	0.01	0.01
		VOC	0.01	0.01
FlareFug	Flare Area Fugitives (5)	VOC	0.01	0.01
Fug-Incin	Incinerator Process Fugitives (5)	H <sub>2</sub> S	0.01	0.01
		VOC	0.01	0.01
MMP-Fug	MMP Process Area Fugitives (5)	VOC	0.01	0.06
MMPRC-Fug	MMP Railcar Loading Area Process Fugitives (5)	VOC	0.04	0.15

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
MMPtks-Fug	MMP Storage Area Process Fugitives (5)	VOC	0.01	0.02
PR-Tower	Product Recovery Tower Fugitives (5)	H <sub>2</sub> S	0.01	0.01
		TRS	0.01	0.01
		VOC	0.02	0.10
RCSHIP	Railcar Loading/Unloading Fugitives (5)	TRS	0.03	0.11
		VOC	0.03	0.11
RUNDOWN	Rundown Tank Fugitives (5)	H <sub>2</sub> S	0.01	0.01
		TRS	0.11	0.46
		VOC	0.11	0.46
STORAGE	Storage Tanks Fugitives (5)	TRS	0.15	0.64
		VOC	0.16	0.69
SulfoxChlr	Sulfox Chiller System (5)	HCFC	0.01	0.01
SWS	Sour Water Strippers Fugitives (5)	H <sub>2</sub> S	0.01	0.01
		TRS	0.01	0.01
		VOC	0.01	0.01
TO-Fug	Thermal Oxidizer Process Fugitives (5)	VOC	0.01	0.01
TTSHIP	Tank Truck Loading/Unloading Fugitives (5)	TRS	0.03	0.11
		VOC	0.03	0.11

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) CO - carbon monoxide  
NO<sub>x</sub> - total oxides of nitrogen  
PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>  
PM<sub>10</sub> - particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>  
PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter  
SO<sub>2</sub> - sulfur dioxide  
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
NaOH - sodium hydroxide

Emission Sources - Maximum Allowable Emission Rates

- H<sub>2</sub>SO<sub>4</sub> - sulfuric acid
  - H<sub>2</sub>S - hydrogen sulfide
  - TRS - total reduced sulfur, includes H<sub>2</sub>S and sulfur bearing VOC, excludes SO<sub>2</sub>
  - MeSH - methyl mercaptan
  - EtSH - ethyl mercaptan
  - TBM - tert-butyl mercaptan
  - DMS - dimethyl sulfide
  - MMP - methylmercaptopropionaldehyde
  - HCFC - hydrochlorofluorocarbons
  - MSS - planned maintenance, startup and shutdown activities
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
  - (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
  - (6) The BMT-1 Unit can produce either methyl mercaptan, ethyl mercaptan, or tert-butyl mercaptan. Therefore, emissions from EPNs, BMT-1M and BMT-1E/T, do not occur simultaneously.
  - (7) Common exhaust stack.
  - (8) PSDTX1016 pollutant.
  - (9) Includes up to 416 hours per calendar year operation as the backup control device for EPN Sulfox-TO when it is not operating and 416 hours per calendar year for EPN INCIN when it is not operating.
  - (10) Planned startup, shutdown and maintenance activity emissions.
  - (11) The current allowable rates until all the amendment modifications are started up, per Special Condition 43.
  - (12) The allowable rates after the amendment modifications are started up, per Special Condition 43.
  - (13) Allowable Flare short term rate during MSS activities
  - (14) Allowable Flare short term rate during high flow events, limited to 100 hours per year.

Date: July 15, 2015