

# FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO  
Formosa Plastics Corporation, Texas

AUTHORIZING THE OPERATION OF  
Formosa Point Comfort Plant  
Caustic/Chlorine and EDC Plants  
Petrochemical Manufacturing

LOCATED AT  
Calhoun County, Texas  
Latitude 28° 41' 20" Longitude 96° 32' 50"  
Regulated Entity Number: RN100218973

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:     O1953     Issuance Date: \_\_\_\_\_

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For the Commission

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## **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, F, G, or H, as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113,

Subchapters C, § 113.110, § 113.120, or § 113.130 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. 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.
- C. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).
- 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(c)(1).
- 5. 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)
6. 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.
  7. For the chemical manufacturing process specified in 40 CFR Part 63, Subpart F, the permit holder shall comply with 40 CFR § 63.103(a) (relating to General Compliance, Reporting, and Recordkeeping Provisions) (Title 30 TAC Chapter 113, Subchapter C, § 113.110 incorporated by reference).
  8. For the chemical manufacturing facilities with a 40 CFR Part 63, Subpart G Group 2 wastewater stream, the permit holder shall comply with (Title 30 TAC Chapter 113, Subchapter C, § 113.120 incorporated by reference):
    - A. Title 40 CFR § 63.132(a), (a)(1), and (a)(1)(i) (relating to Process Wastewater Provisions - General)
    - B. Title 40 CFR § 63.146(b)(1) (relating to Process Wastewater Provisions - Reporting)
    - C. Title 40 CFR § 63.147(b)(8) (relating to Process Wastewater Provisions - Recordkeeping)
  9. For the chemical manufacturing facilities subject to leak detection requirements in 40 CFR Part 63, Subpart G, the permit holder shall comply with the following requirements (Title 30 TAC Chapter 113, Subchapter C, § 113.120 incorporated by reference):
    - A. General Leak Detection Requirements:
      - (i) Title 40 CFR § 63.148(d)(1) - (3), and (e) (relating to Leak Inspection Provisions)
      - (ii) Title 40 CFR § 63.148(c), (g), (g)(2), (h), and (h)(2) (relating to Leak Inspection Provisions), for monitoring and testing requirements
      - (iii) Title 40 CFR §§ 63.148(g)(2), (h)(2), (i)(1) - (2), (i)(4)(i) - (viii), (i)(5), and 63.152(a)(1) - (5), for recordkeeping requirements
      - (iv) Title 40 CFR §§ 63.148(j), 63.151(a)(6)(i) - (iii), (b)(1) - (2), (j)(1) - (3), 63.152(a)(1) - (5), (b), (b)(1)(i) - (ii), and (b)(4), for reporting requirements
    - B. For closed vent system or vapor collection systems constructed of hard piping:
      - (i) Title 40 CFR § 63.148(b)(1)(ii) (relating to Leak Inspection Provisions), for monitoring and testing requirements
      - (ii) Title 40 CFR § 63.148(i)(6) (relating to Leak Inspection Provisions), for recordkeeping requirements
  10. The permit holder shall comply with certified registrations submitted to the TCEQ for purposes of establishing federally enforceable emission limits. A copy of the certified registration shall be maintained with the permit. Records sufficient to demonstrate compliance with the established limits shall be maintained. The certified registration and records demonstrating compliance shall be provided, on request, to representatives of the appropriate TCEQ regional office and any local air pollution control agency having jurisdiction over the site. The permit holder shall submit

updated certified registrations when changes at the site require establishment of new emission limits. If changes result in emissions that do not remain below major source thresholds, the permit holder shall submit a revision application to codify the appropriate requirements in the permit.

### **Additional Monitoring Requirements**

11. 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 or minimum frequency 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**

12. 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 (including the terms, conditions, monitoring, recordkeeping, and reporting identified in registered PBRs and permits by rule identified in the PBR Supplemental Tables dated July 18, 2025 in the application for project 38605), 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
13. 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.
14. 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).
15. The permit holder shall comply with the following requirements for Air Quality Standard Permits:

- A. Registration requirements listed in 30 TAC § 116.611, unless otherwise provided for in an Air Quality Standard Permit
- B. General Conditions listed in 30 TAC § 116.615, unless otherwise provided for in an Air Quality Standard Permit
- C. Requirements of the non-rule Air Quality Standard Permit for Pollution Control Projects

### **Compliance Requirements**

- 16. 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.
- 17. 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**

- 18. 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**

19. 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.

### **Alternative Requirements**

20. The permit holder shall comply with the approved alternative means of control (AMOC); alternative monitoring, recordkeeping, or reporting requirements; or requirements determined to be equivalent to an otherwise applicable requirement contained in the Alternative Requirements attachment of this permit. Units complying with an approved alternative requirement have reference to the approval in the Applicable Requirements summary listing for the unit. The permit holder shall maintain the original documentation, from the TCEQ Executive Director, demonstrating the method or limitation utilized. Documentation shall be maintained and made available in accordance with 30 TAC § 122.144.

### **Permit Location**

21. 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)**

22. 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**

**Alternative Requirement**

**Applicable Requirements Summary**

**Unit Summary** ..... 11

**Applicable Requirements Summary** ..... 14

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**

<b>Unit/Group/ Process ID No.</b>	<b>Unit Type</b>	<b>Group/Inclusive Units</b>	<b>SOP Index No.</b>	<b>Regulation</b>	<b>Requirement Driver</b>
2C-C1	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111-2	30 TAC Chapter 111, Visible Emissions	No changing attributes.
2C-C2	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111-2	30 TAC Chapter 111, Visible Emissions	No changing attributes.
6002A/B/C	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
6002A/B/C	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63G-2	40 CFR Part 63, Subpart G	Overlap = Title 40 CFR Part 60, Subpart RRR
6002A/B/C	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63G-3	40 CFR Part 63, Subpart G	Overlap = Title 40 CFR Part 60, Subpart NNN
6002C	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Dc-2	40 CFR Part 60, Subpart Dc	No changing attributes.
DT-255	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	N/A	R5131-1	30 TAC Chapter 115, Water Separation	No changing attributes.
DT-255B	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	N/A	R5131-1	30 TAC Chapter 115, Water Separation	No changing attributes.
DT-402A	STORAGE TANKS/VESSELS	N/A	R5112-2	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
DT-402A	STORAGE TANKS/VESSELS	N/A	63G-1	40 CFR Part 63, Subpart G	No changing attributes.
DT-402B	STORAGE	N/A	R5112-2	30 TAC Chapter 115,	No changing attributes.

**Unit Summary**

<b>Unit/Group/ Process ID No.</b>	<b>Unit Type</b>	<b>Group/Inclusive Units</b>	<b>SOP Index No.</b>	<b>Regulation</b>	<b>Requirement Driver</b>
	TANKS/VESSELS			Storage of VOCs	
DT-402B	STORAGE TANKS/VESSELS	N/A	63G-1	40 CFR Part 63, Subpart G	No changing attributes.
DT-402C	STORAGE TANKS/VESSELS	N/A	R5112-2	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
DT-402C	STORAGE TANKS/VESSELS	N/A	63G-1	40 CFR Part 63, Subpart G	No changing attributes.
DT-407A	STORAGE TANKS/VESSELS	N/A	R5112-1	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
DT-407A	STORAGE TANKS/VESSELS	N/A	63G-1	40 CFR Part 63, Subpart G	No changing attributes.
DT-407B	STORAGE TANKS/VESSELS	N/A	R5112-1	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
DT-407B	STORAGE TANKS/VESSELS	N/A	63G-1	40 CFR Part 63, Subpart G	No changing attributes.
DV-101	STORAGE TANKS/VESSELS	N/A	R5112-1	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
DV-101	STORAGE TANKS/VESSELS	N/A	63G-1	40 CFR Part 63, Subpart G	No changing attributes.
DV-252	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	N/A	R5131-1	30 TAC Chapter 115, Water Separation	No changing attributes.
DV-252B	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	N/A	R5131-1	30 TAC Chapter 115, Water Separation	No changing attributes.
EDC PLANT	CHEMICAL MANUFACTURING PROCESS	N/A	63F-1	40 CFR Part 63, Subpart F	No changing attributes.

**Unit Summary**

<b>Unit/Group/ Process ID No.</b>	<b>Unit Type</b>	<b>Group/Inclusive Units</b>	<b>SOP Index No.</b>	<b>Regulation</b>	<b>Requirement Driver</b>
EDC-CT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111-2	30 TAC Chapter 111, Visible Emissions	No changing attributes.
EDCFUG	FUGITIVE EMISSION UNITS	N/A	63H-1	40 CFR Part 63, Subpart H	ENCL COMB DEV (CVS) = COMPONENT NOT PRESENT, FLARES (CVS) = COMPONENT PRESENT
EDCFUG	FUGITIVE EMISSION UNITS	N/A	63H-2	40 CFR Part 63, Subpart H	ENCL COMB DEV (CVS) = COMPONENT PRESENT, FLARES (CVS) = COMPONENT NOT PRESENT
GRP-INCINERATE	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	6002A, 6002B	60Dc-1	40 CFR Part 60, Subpart Dc	No changing attributes.
HE LOADING	LOADING/UNLOADING OPERATIONS	N/A	R5211-1	30 TAC Chapter 115, Loading and Unloading of VOC	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)
2C-C1	EP	R1111-2	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
2C-C2	EP	R1111-2	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
6002A/B/C	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(c)(1) § 115.121(c)(1) § 115.122(c)(1)(A)	For all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, any vent gas streams affected by §115.121(c)(1) must be controlled properly using one of the control requirements specified in §115.122(c)(1)(A)-(C).	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2)	None
6002A/B/C	EP	63G-2	112(B) HAPS	40 CFR Part 63, Subpart G	[G]§ 63.113(a)(2) § 63.113(c)(1) § 63.113(c)(1)(i) § 63.113(h) [G]§ 63.115(f) § 63.116(b)	Reduce emissions of total organic HAPs by 98 wt.% or to a concentration of 20 ppm by volume; whichever is less stringent or as specified. §63.113(a)(2)(i)-(ii)	§ 63.114(a) § 63.114(a)(1)(i) [G]§ 63.114(a)(4) § 63.114(e) [G]§ 63.115(f) [G]§ 63.116(d)	§ 63.114(a)(1) [G]§ 63.114(a)(4) [G]§ 63.117(a)(6) § 63.118(a)(1) § 63.118(a)(2) [G]§ 63.152(a) [G]§ 63.152(f)	§ 63.114(e) [G]§ 63.117(a)(6) § 63.117(f) § 63.118(f)(1) § 63.118(f)(2) [G]§ 63.151(b) § 63.151(e) [G]§ 63.151(e)(1) § 63.151(e)(2) § 63.151(e)(3) [G]§ 63.151(j) [G]§ 63.152(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)
									§ 63.152(b) [G]§ 63.152(b)(1) [G]§ 63.152(b)(2) § 63.152(c)(1) § 63.152(c)(2) § 63.152(c)(2)(i) [G]§ 63.152(c)(2)(ii) § 63.152(c)(2)(iii) § 63.152(c)(4)(ii) [G]§ 63.152(c)(6)
6002A/B/C	EP	63G-3	112(B) HAPS	40 CFR Part 63, Subpart G	[G]§ 63.113(a)(2) § 63.113(c)(1) § 63.113(c)(1)(i) § 63.113(h) [G]§ 63.115(f) § 63.116(b)	Reduce emissions of total organic HAPs by 98 wt.% or to a concentration of 20 ppm by volume; whichever is less stringent or as specified. §63.113(a)(2)(i)-(ii)	§ 63.114(a) § 63.114(a)(1)(i) [G]§ 63.114(a)(4) § 63.114(e) [G]§ 63.115(f) [G]§ 63.116(d)	§ 63.114(a)(1) [G]§ 63.114(a)(4) [G]§ 63.117(a)(6) § 63.118(a)(1) § 63.118(a)(2) [G]§ 63.152(a) [G]§ 63.152(f)	§ 63.114(e) [G]§ 63.117(a)(6) § 63.117(f) § 63.118(f)(1) § 63.118(f)(2) [G]§ 63.151(b) § 63.151(e) [G]§ 63.151(e)(1) § 63.151(e)(2) § 63.151(e)(3) [G]§ 63.151(j) [G]§ 63.152(a) § 63.152(b) [G]§ 63.152(b)(1) [G]§ 63.152(b)(2) § 63.152(c)(1) § 63.152(c)(2) § 63.152(c)(2)(i) [G]§ 63.152(c)(2)(ii) § 63.152(c)(2)(iii) § 63.152(c)(4)(ii) [G]§ 63.152(c)(6)
6002C	EU	60Dc-2	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	None	§ 60.48c(g)(1) § 60.48c(g)(2) § 60.48c(g)(3) § 60.48c(i)	[G]§ 60.48c(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)
						megawatts (MW).			
6002C	EU	60Dc-2	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(i)	[G]§ 60.48c(a)
6002C	EU	60Dc-2	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(i)	[G]§ 60.48c(a)
DT-255	EU	R5131-1	VOC	30 TAC Chapter 115, Water Separation	§ 115.132(c)(3) § 115.131(c)	VOC water separator compartments must be equipped with a vapor recovery system which satisfies the provisions of §115.131(c) of this title.	** See Periodic Monitoring Summary	None	None
DT-255B	EU	R5131-1	VOC	30 TAC Chapter 115, Water Separation	§ 115.132(c)(3) § 115.131(c)	VOC water separator compartments must be equipped with a vapor recovery system which satisfies the provisions of §115.131(c) of this title.	** See Periodic Monitoring Summary	None	None
DT-402A	EU	R5112-2	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(c)(1)	Tanks shall not store VOC, other than crude oil or condensate, unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(b).	** See Periodic Monitoring Summary	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)
DT-402A	EU	63G-1	112(B) HAPS	40 CFR Part 63, Subpart G	§ 63.119(e) § 63.119(a)(1) § 63.119(e)(1) § 63.119(e)(3) § 63.119(e)(4) § 63.119(e)(5) [G]§ 63.148(d) § 63.148(e)	The owner or operator who elects to use a closed vent system and control device (defined in § 63.111) to comply with §63.119(a)(1) or (a)(2) shall comply with §63.119(e)(1)-(5).	§ 63.120(d)(1) § 63.120(d)(1)(ii) § 63.120(d)(1)(ii)(A) § 63.120(d)(5) § 63.120(d)(6) § 63.148(b)(1)(ii) [G]§ 63.148(c) § 63.148(g) § 63.148(g)(2) § 63.148(h) § 63.148(i)(6) § 63.148(h)(2)	§ 63.123(a) § 63.123(f)(1) [G]§ 63.123(f)(2) § 63.148(g)(2) § 63.148(h)(2) § 63.148(i)(1) § 63.148(i)(2) [G]§ 63.148(i)(4) § 63.148(i)(5) § 63.148(i)(6) [G]§ 63.152(a)	§ 63.120(d)(1)(ii)(B) § 63.120(d)(2) § 63.120(d)(2)(i) [G]§ 63.120(d)(2)(iii) § 63.120(d)(3) § 63.120(d)(3)(i) § 63.120(d)(3)(ii) § 63.120(d)(4) § 63.122(b) § 63.122(c)(1) [G]§ 63.122(g)(1) [G]§ 63.122(g)(2) § 63.148(j) § 63.148(j)(1) § 63.151(a)(7) [G]§ 63.151(b) [G]§ 63.151(j) [G]§ 63.152(a) § 63.152(b) [G]§ 63.152(b)(1) § 63.152(b)(4) § 63.152(c)(1) § 63.152(c)(2) § 63.152(c)(2)(i) [G]§ 63.152(c)(2)(ii) § 63.152(c)(2)(iii) § 63.152(c)(3) § 63.152(c)(3)(i) § 63.152(c)(4)(ii) [G]§ 63.152(c)(6)
DT-402B	EU	R5112-2	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(c)(1)	Tanks shall not store VOC, other than crude oil or condensate, unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(b).	** See Periodic Monitoring Summary	None	None

**Applicable Requirements Summary**

<b>Unit Group Process ID No.</b>	<b>Unit Group Process Type</b>	<b>SOP Index No.</b>	<b>Pollutant</b>	<b>State Rule or Federal Regulation Name</b>	<b>Emission Limitation, Standard or Equipment Specification Citation</b>	<b>Textual Description (See Special Term and Condition 1.B.)</b>	<b>Monitoring And Testing Requirements</b>	<b>Recordkeeping Requirements (30 TAC § 122.144)</b>	<b>Reporting Requirements (30 TAC § 122.145)</b>
DT-402B	EU	63G-1	112(B) HAPS	40 CFR Part 63, Subpart G	§ 63.119(e) § 63.119(a)(1) § 63.119(e)(1) § 63.119(e)(3) § 63.119(e)(4) § 63.119(e)(5) [G]§ 63.148(d) § 63.148(e)	The owner or operator who elects to use a closed vent system and control device (defined in § 63.111) to comply with §63.119(a)(1) or (a)(2) shall comply with §63.119(e)(1)-(5).	§ 63.120(d)(1) § 63.120(d)(1)(ii) § 63.120(d)(1)(ii)(A) § 63.120(d)(5) § 63.120(d)(6) § 63.148(b)(1)(ii) [G]§ 63.148(c) § 63.148(g) § 63.148(g)(2) § 63.148(h) § 63.148(i)(6) § 63.148(h)(2)	§ 63.123(a) § 63.123(f)(1) [G]§ 63.123(f)(2) § 63.148(g)(2) § 63.148(h)(2) § 63.148(i)(1) § 63.148(i)(2) [G]§ 63.148(i)(4) § 63.148(i)(5) § 63.148(i)(6) [G]§ 63.152(a)	§ 63.120(d)(1)(ii)(B) § 63.120(d)(2) § 63.120(d)(2)(i) [G]§ 63.120(d)(2)(iii) § 63.120(d)(3) § 63.120(d)(3)(i) § 63.120(d)(3)(ii) § 63.120(d)(4) § 63.122(b) § 63.122(c)(1) [G]§ 63.122(g)(1) [G]§ 63.122(g)(2) § 63.148(j) § 63.148(j)(1) § 63.151(a)(7) [G]§ 63.151(b) [G]§ 63.151(j) [G]§ 63.152(a) § 63.152(b) [G]§ 63.152(b)(1) § 63.152(b)(4) § 63.152(c)(1) § 63.152(c)(2) § 63.152(c)(2)(i) [G]§ 63.152(c)(2)(ii) § 63.152(c)(2)(iii) § 63.152(c)(3) § 63.152(c)(3)(i) § 63.152(c)(4)(ii) [G]§ 63.152(c)(6)
DT-402C	EU	R5112-2	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(c)(1)	Tanks shall not store VOC, other than crude oil or condensate, unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(b).	** See Periodic Monitoring Summary	None	None

**Applicable Requirements Summary**

<b>Unit Group Process ID No.</b>	<b>Unit Group Process Type</b>	<b>SOP Index No.</b>	<b>Pollutant</b>	<b>State Rule or Federal Regulation Name</b>	<b>Emission Limitation, Standard or Equipment Specification Citation</b>	<b>Textual Description (See Special Term and Condition 1.B.)</b>	<b>Monitoring And Testing Requirements</b>	<b>Recordkeeping Requirements (30 TAC § 122.144)</b>	<b>Reporting Requirements (30 TAC § 122.145)</b>
DT-402C	EU	63G-1	112(B) HAPS	40 CFR Part 63, Subpart G	§ 63.119(e) § 63.119(a)(1) § 63.119(e)(1) § 63.119(e)(3) § 63.119(e)(4) § 63.119(e)(5) [G]§ 63.148(d) § 63.148(e)	The owner or operator who elects to use a closed vent system and control device (defined in § 63.111) to comply with §63.119(a)(1) or (a)(2) shall comply with §63.119(e)(1)-(5).	§ 63.120(d)(1) § 63.120(d)(1)(ii) § 63.120(d)(1)(ii)(A) § 63.120(d)(5) § 63.120(d)(6) § 63.148(b)(1)(ii) [G]§ 63.148(c) § 63.148(g) § 63.148(g)(2) § 63.148(h) § 63.148(i)(6) § 63.148(h)(2)	§ 63.123(a) § 63.123(f)(1) [G]§ 63.123(f)(2) § 63.148(g)(2) § 63.148(h)(2) § 63.148(i)(1) § 63.148(i)(2) [G]§ 63.148(i)(4) § 63.148(i)(5) § 63.148(i)(6) [G]§ 63.152(a)	§ 63.120(d)(1)(ii)(B) § 63.120(d)(2) § 63.120(d)(2)(i) [G]§ 63.120(d)(2)(iii) § 63.120(d)(3) § 63.120(d)(3)(i) § 63.120(d)(3)(ii) § 63.120(d)(4) § 63.122(b) § 63.122(c)(1) [G]§ 63.122(g)(1) [G]§ 63.122(g)(2) § 63.148(j) § 63.148(j)(1) § 63.151(a)(7) [G]§ 63.151(b) [G]§ 63.151(j) [G]§ 63.152(a) § 63.152(b) [G]§ 63.152(b)(1) § 63.152(b)(4) § 63.152(c)(1) § 63.152(c)(2) § 63.152(c)(2)(i) [G]§ 63.152(c)(2)(ii) § 63.152(c)(2)(iii) § 63.152(c)(3) § 63.152(c)(3)(i) § 63.152(c)(4)(ii) [G]§ 63.152(c)(6)
DT-407A	EU	R5112-1	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(c)(1)	Tanks shall not store VOC, other than crude oil or condensate, unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(b).	** See Periodic Monitoring Summary	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)
DT-407A	EU	63G-1	112(B) HAPS	40 CFR Part 63, Subpart G	§ 63.119(e) § 63.119(a)(1) § 63.119(e)(1) § 63.119(e)(3) § 63.119(e)(4) § 63.119(e)(5) [G]§ 63.148(d) § 63.148(e)	The owner or operator who elects to use a closed vent system and control device (defined in § 63.111) to comply with §63.119(a)(1) or (a)(2) shall comply with §63.119(e)(1)-(5).	§ 63.120(d)(1) § 63.120(d)(1)(ii) § 63.120(d)(1)(ii)(A) § 63.120(d)(5) § 63.120(d)(6) § 63.148(b)(1)(ii) [G]§ 63.148(c) § 63.148(g) § 63.148(g)(2) § 63.148(h) § 63.148(h)(2)	§ 63.123(a) § 63.123(f)(1) [G]§ 63.123(f)(2) § 63.148(g)(2) § 63.148(h)(2) § 63.148(i)(1) § 63.148(i)(2) [G]§ 63.148(i)(4) § 63.148(i)(5) § 63.148(i)(6) [G]§ 63.152(a)	§ 63.120(d)(1)(ii)(B) § 63.120(d)(2) § 63.120(d)(2)(i) [G]§ 63.120(d)(2)(iii) § 63.120(d)(3) § 63.120(d)(3)(i) § 63.120(d)(3)(ii) § 63.120(d)(4) § 63.122(b) § 63.122(c)(1) [G]§ 63.122(g)(1) [G]§ 63.122(g)(2) § 63.148(j) § 63.148(j)(1) § 63.151(a)(7) [G]§ 63.151(b) [G]§ 63.151(j) [G]§ 63.152(a) § 63.152(b) [G]§ 63.152(b)(1) § 63.152(b)(4) § 63.152(c)(1) § 63.152(c)(2) § 63.152(c)(2)(i) [G]§ 63.152(c)(2)(ii) § 63.152(c)(2)(iii) § 63.152(c)(3) § 63.152(c)(3)(i) § 63.152(c)(4)(ii) [G]§ 63.152(c)(6)
DT-407B	EU	R5112-1	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(c)(1)	Tanks shall not store VOC, other than crude oil or condensate, unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(b).	** See Periodic Monitoring Summary	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)
DT-407B	EU	63G-1	112(B) HAPS	40 CFR Part 63, Subpart G	§ 63.119(e) § 63.119(a)(1) § 63.119(e)(1) § 63.119(e)(3) § 63.119(e)(4) § 63.119(e)(5) [G]§ 63.148(d) § 63.148(e)	The owner or operator who elects to use a closed vent system and control device (defined in § 63.111) to comply with §63.119(a)(1) or (a)(2) shall comply with §63.119(e)(1)-(5).	§ 63.120(d)(1) § 63.120(d)(1)(ii) § 63.120(d)(1)(ii)(A) § 63.120(d)(5) § 63.120(d)(6) § 63.148(b)(1)(ii) [G]§ 63.148(c) § 63.148(g) § 63.148(g)(2) § 63.148(h) § 63.148(i)(6) § 63.148(h)(2)	§ 63.123(a) § 63.123(f)(1) [G]§ 63.123(f)(2) § 63.148(g)(2) § 63.148(h)(2) § 63.148(i)(1) § 63.148(i)(2) [G]§ 63.148(i)(4) § 63.148(i)(5) § 63.148(i)(6) [G]§ 63.152(a)	§ 63.120(d)(1)(ii)(B) § 63.120(d)(2) § 63.120(d)(2)(i) [G]§ 63.120(d)(2)(iii) § 63.120(d)(3) § 63.120(d)(3)(i) § 63.120(d)(3)(ii) § 63.120(d)(4) § 63.122(b) § 63.122(c)(1) [G]§ 63.122(g)(1) [G]§ 63.122(g)(2) § 63.148(j) § 63.148(j)(1) § 63.151(a)(7) [G]§ 63.151(b) [G]§ 63.151(j) [G]§ 63.152(a) § 63.152(b) [G]§ 63.152(b)(1) § 63.152(b)(4) § 63.152(c)(1) § 63.152(c)(2) § 63.152(c)(2)(i) [G]§ 63.152(c)(2)(ii) § 63.152(c)(2)(iii) § 63.152(c)(3) § 63.152(c)(3)(i) § 63.152(c)(4)(ii) [G]§ 63.152(c)(6)
DV-101	EU	R5112-1	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(c)(1)	Tanks shall not store VOC, other than crude oil or condensate, unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(b).	** See Periodic Monitoring Summary	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)
DV-101	EU	63G-1	112(B) HAPS	40 CFR Part 63, Subpart G	§ 63.119(e) § 63.119(a)(1) § 63.119(e)(1) § 63.119(e)(3) § 63.119(e)(4) § 63.119(e)(5) [G]§ 63.148(d) § 63.148(e)	The owner or operator who elects to use a closed vent system and control device (defined in § 63.111) to comply with §63.119(a)(1) or (a)(2) shall comply with §63.119(e)(1)-(5).	§ 63.120(d)(1) § 63.120(d)(1)(ii) § 63.120(d)(1)(ii)(A) § 63.120(d)(5) § 63.120(d)(6) § 63.148(b)(1)(ii) [G]§ 63.148(c) § 63.148(g) § 63.148(g)(2) § 63.148(h) § 63.148(i)(6) § 63.148(h)(2)	§ 63.123(a) § 63.123(f)(1) [G]§ 63.123(f)(2) § 63.148(g)(2) § 63.148(h)(2) § 63.148(i)(1) § 63.148(i)(2) [G]§ 63.148(i)(4) § 63.148(i)(5) § 63.148(i)(6) [G]§ 63.152(a)	§ 63.120(d)(1)(ii)(B) § 63.120(d)(2) § 63.120(d)(2)(i) [G]§ 63.120(d)(2)(iii) § 63.120(d)(3) § 63.120(d)(3)(i) § 63.120(d)(3)(ii) § 63.120(d)(4) § 63.122(b) § 63.122(c)(1) [G]§ 63.122(g)(1) [G]§ 63.122(g)(2) § 63.148(j) § 63.148(j)(1) § 63.151(a)(7) [G]§ 63.151(b) [G]§ 63.151(j) [G]§ 63.152(a) § 63.152(b) [G]§ 63.152(b)(1) § 63.152(b)(4) § 63.152(c)(1) § 63.152(c)(2) § 63.152(c)(2)(i) [G]§ 63.152(c)(2)(ii) § 63.152(c)(2)(iii) § 63.152(c)(3) § 63.152(c)(3)(i) § 63.152(c)(4)(ii) [G]§ 63.152(c)(6)
DV-252	EU	R5131-1	VOC	30 TAC Chapter 115, Water Separation	§ 115.132(c)(3) § 115.131(c)	VOC water separator compartments must be equipped with a vapor recovery system which satisfies the provisions of §115.131(c) of this title.	** See Periodic Monitoring Summary	None	None
DV-252B	EU	R5131-1	VOC	30 TAC Chapter 115, Water	§ 115.132(c)(3) § 115.131(c)	VOC water separator compartments must be	** See Periodic Monitoring	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)
				Separation		equipped with a vapor recovery system which satisfies the provisions of §115.131(c) of this title.	Summary		
EDC PLANT	PRO	63F-1	112(B) HAPS	40 CFR Part 63, Subpart F	§ 63.100(b) [G]§ 63.102(a) [G]§ 63.102(c) § 63.104(a) [G]§ 63.104(d) § 63.104(e) § 63.104(e)(1) [G]§ 63.104(e)(2) § 63.105(d)	Except as provided in paragraphs (b)(4) and (c) of this section, the provisions of subparts F, G, and H apply to chemical manufacturing process units that meet the criteria.	§ 63.103(b)(1) § 63.103(b)(3) § 63.103(b)(4) [G]§ 63.103(b)(5) § 63.103(b)(6) [G]§ 63.104(b) [G]§ 63.104(g) [G]§ 63.104(h) § 63.104(i) [G]§ 63.104(j)	[G]§ 63.103(c) [G]§ 63.104(e)(2) [G]§ 63.104(f)(1) [G]§ 63.105(b) § 63.105(c) § 63.105(e)	§ 63.103(b)(2) [G]§ 63.103(b)(5) [G]§ 63.103(d) [G]§ 63.104(f)(2)
EDC-CT	EP	R1111-2	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
EDCFUG	EU	63H-1	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.174 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Connectors in gas/vapor service and in light liquid service. §63.174(a)-(j)	[G]§ 63.174 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-1	112(B) HAPS	40 CFR Part 63, Subpart H	§ 63.172(d) § 63.11(b) § 63.172(e) [G]§ 63.172(h) § 63.172(m)	Flares used to comply with this subpart shall comply with the requirements of § 63.11(b) of 40 CFR 63, Subpart A.	§ 63.172(e) [G]§ 63.172(h) [G]§ 63.180(b) [G]§ 63.180(d) [G]§ 63.180(e)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(g) § 63.181(g)(1)(i) § 63.181(g)(1)(ii) § 63.181(g)(1)(iii)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(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)
								§ 63.181(g)(1)(iv) [G]§ 63.181(g)(2)	
EDCFUG	EU	63H-1	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.166 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Sampling connection systems. §63.166(a)-(c)	[G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-1	112(B) HAPS	40 CFR Part 63, Subpart H	§ 63.172(a) [G]§ 63.172(h) § 63.172(i) § 63.172(m)	Owners/operators of closed-vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section, except as provided in §63.162(b).	[G]§ 63.172(f)(1) [G]§ 63.172(f)(2) § 63.172(g) [G]§ 63.172(h) [G]§ 63.172(l) [G]§ 63.180(b) [G]§ 63.180(d)	[G]§ 63.172(l) § 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(g) § 63.181(g)(1)(i) § 63.181(g)(1)(ii) [G]§ 63.181(g)(2) [G]§ 63.181(g)(3)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-1	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.163 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171 [G]§ 63.176	Standards: Pumps in light liquid service. §63.163(a)-(j)	[G]§ 63.163 [G]§ 63.176 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(h) [G]§ 63.181(h)(3) § 63.181(h)(4) [G]§ 63.181(h)(5) § 63.181(h)(6) § 63.181(h)(7) § 63.181(h)(8)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-1	112(B) HAPS	40 CFR Part 63, Subpart H	§ 63.170 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Surge control vessels and bottom receivers.	[G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-1	112(B)	40 CFR Part 63,	[G]§ 63.167	Standards: Open-ended	[G]§ 63.180(b)	§ 63.181(a)	[G]§ 63.182(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)
			HAPS	Subpart H	§ 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	valves or lines. §63.167(a)-(e).	[G]§ 63.180(d)	[G]§ 63.181(b) § 63.181(c)	[G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-1	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Instrumentation systems. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-1	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.165 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Pressure relief device in gas/vapor service. §63.165(a)-(d)	[G]§ 63.165 [G]§ 63.180(b) [G]§ 63.180(c) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(f)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-1	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.168 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171 [G]§ 63.175	Standards: Valves in gas/vapor service and in light liquid service. §63.168(a)-(j)	[G]§ 63.168 [G]§ 63.175 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(h) [G]§ 63.181(h)(1) [G]§ 63.181(h)(2) § 63.181(h)(4) [G]§ 63.181(h)(5) § 63.181(h)(6) § 63.181(h)(7)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-2	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.167 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Open-ended valves or lines. §63.167(a)-(e).	[G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-2	112(B)	40 CFR Part 63,	[G]§ 63.168	Standards: Valves in	[G]§ 63.168	§ 63.181(a)	[G]§ 63.182(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)
			HAPS	Subpart H	§ 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171 [G]§ 63.175	gas/vapor service and in light liquid service. §63.168(a)-(j)	[G]§ 63.175 [G]§ 63.180(b) [G]§ 63.180(d)	[G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(h) [G]§ 63.181(h)(1) [G]§ 63.181(h)(2) § 63.181(h)(4) [G]§ 63.181(h)(5) § 63.181(h)(6) § 63.181(h)(7)	[G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-2	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.163 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171 [G]§ 63.176	Standards: Pumps in light liquid service. §63.163(a)-(j)	[G]§ 63.163 [G]§ 63.176 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(h) [G]§ 63.181(h)(3) § 63.181(h)(4) [G]§ 63.181(h)(5) § 63.181(h)(6) § 63.181(h)(7) § 63.181(h)(8)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-2	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.174 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Connectors in gas/vapor service and in light liquid service. §63.174(a)-(j)	[G]§ 63.174 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-2	112(B) HAPS	40 CFR Part 63, Subpart H	§ 63.172(c) § 63.172(e) [G]§ 63.172(h) § 63.172(m)	Enclosed combustion devices shall be designed and operated to reduce the organic HAP or VOC emissions vented to them with requirements as specified in this section.	§ 63.172(e) [G]§ 63.172(h) [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(g) § 63.181(g)(1)(i) § 63.181(g)(1)(ii) § 63.181(g)(1)(iv) [G]§ 63.181(g)(2)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(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)
EDCFUG	EU	63H-2	112(B) HAPS	40 CFR Part 63, Subpart H	§ 63.172(a) [G]§ 63.172(h) § 63.172(i) § 63.172(m)	Owners/operators of closed-vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section, except as provided in §63.162(b).	[G]§ 63.172(f)(1) [G]§ 63.172(f)(2) § 63.172(g) [G]§ 63.172(h) [G]§ 63.172(l) [G]§ 63.180(b) [G]§ 63.180(d)	[G]§ 63.172(l) § 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(g) § 63.181(g)(1)(i) § 63.181(g)(1)(ii) [G]§ 63.181(g)(2) [G]§ 63.181(g)(3)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-2	112(B) HAPS	40 CFR Part 63, Subpart H	§ 63.170 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Surge control vessels and bottom receivers.	[G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-2	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Instrumentation systems. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-2	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.166 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Sampling connection systems. §63.166(a)-(c)	[G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
EDCFUG	EU	63H-2	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.165 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Pressure relief device in gas/vapor service. §63.165(a)-(d)	[G]§ 63.165 [G]§ 63.180(b) [G]§ 63.180(c) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(f)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
GRP-	EU	60Dc-1	PM	40 CFR Part 60,	§ 60.40c(a)	This subpart applies to each	None	§ 60.48c(g)(1)	[G]§ 60.48c(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)
INCINERATE				Subpart Dc		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).		§ 60.48c(g)(2) § 60.48c(g)(3) § 60.48c(i)	
GRP-INCINERATE	EU	60Dc-1	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(i)	[G]§ 60.48c(a)
GRP-INCINERATE	EU	60Dc-1	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(i)	[G]§ 60.48c(a)
HE LOADING	EU	R5211-1	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.212(b)(1) § 115.212(b)(1)(A) § 115.212(b)(3)(A) § 115.212(b)(3)(A)(i) § 115.212(b)(3)(B) [G]§ 115.212(b)(3)(C) § 115.212(b)(3)(E) § 115.214(b)(1)(B) § 115.214(b)(1)(C)	In Aransas, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties, vapors caused by the loading of VOC with a TVP greater than or equal to 1.5 psia must be controlled using one of the methods specified in §115.212(b)(1)(A)-(C).	§ 115.212(b)(3)(B) [G]§ 115.212(b)(3)(C) § 115.214(b)(1)(A) § 115.214(b)(1)(A)(i) § 115.214(b)(1)(A)(ii) § 115.214(b)(1)(A)(iii) § 115.215 § 115.215(1) § 115.215(10) [G]§ 115.215(2) § 115.215(4) § 115.215(5) § 115.215(8) § 115.215(9)	§ 115.216 § 115.216(1) § 115.216(1)(C) § 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

**Additional Monitoring Requirements**

**Periodic Monitoring Summary ..... 30**

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: 2C-C1	
Control Device ID No.: N/A	Control Device Type: N/A
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-2
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: Once per year	
Averaging Period: N/A	
Deviation Limit: Opacity shall not exceed 15% averaged over a six-minute period for any source having a total flow rate greater than or equal to 100,000 acfm.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. 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.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: 2C-C2	
Control Device ID No.: N/A	Control Device Type: N/A
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-2
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: Once per year	
Averaging Period: N/A	
Deviation Limit: Opacity shall not exceed 15% averaged over a six-minute period for any source having a total flow rate greater than or equal to 100,000 acfm.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. 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.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: DT-255	
Control Device ID No.: 6002A/B/C	Control Device Type: Thermal incinerator (direct flame incinerator/regenerative thermal oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Water Separation	SOP Index No.: R5131-1
Pollutant: VOC	Main Standard: § 115.132(c)(3)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit	
<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>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: DT-255B	
Control Device ID No.: 6002A/B/C	Control Device Type: Thermal incinerator (direct flame incinerator/regenerative thermal oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Water Separation	SOP Index No.: R5131-1
Pollutant: VOC	Main Standard: § 115.132(c)(3)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit	
<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>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: DT-402A	
Control Device ID No.: 6002A/B/C	Control Device Type: Thermal incinerator (direct flame incinerator/regenerative thermal oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112-2
Pollutant: VOC	Main Standard: § 115.112(c)(1)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit	
<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>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: DT-402B	
Control Device ID No.: 6002A/B/C	Control Device Type: Thermal incinerator (direct flame incinerator/regenerative thermal oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112-2
Pollutant: VOC	Main Standard: § 115.112(c)(1)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit	
<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>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: DT-402C	
Control Device ID No.: 6002A/B/C	Control Device Type: Thermal incinerator (direct flame incinerator/regenerative thermal oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112-2
Pollutant: VOC	Main Standard: § 115.112(c)(1)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit	
<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>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: DT-407A	
Control Device ID No.: 6002A/B/C	Control Device Type: Thermal incinerator (direct flame incinerator/regenerative thermal oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112-1
Pollutant: VOC	Main Standard: § 115.112(c)(1)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit	
<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>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: DT-407B	
Control Device ID No.: 60002A/B/C	Control Device Type: Thermal incinerator (direct flame incinerator/regenerative thermal oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112-1
Pollutant: VOC	Main Standard: § 115.112(c)(1)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit	
<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>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: DV-101	
Control Device ID No.: 6002A/B/C	Control Device Type: Thermal incinerator (direct flame incinerator/regenerative thermal oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112-1
Pollutant: VOC	Main Standard: § 115.112(c)(1)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit	
<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>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: DV-252	
Control Device ID No.: 6002A/B/C	Control Device Type: Thermal incinerator (direct flame incinerator/regenerative thermal oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Water Separation	SOP Index No.: R5131-1
Pollutant: VOC	Main Standard: § 115.132(c)(3)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit	
<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>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: DV-252B	
Control Device ID No.: 6002A/B/C	Control Device Type: Thermal incinerator (direct flame incinerator/regenerative thermal oxidizer)
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 115, Water Separation	SOP Index No.: R5131-1
Pollutant: VOC	Main Standard: § 115.132(c)(3)
<b>Monitoring Information</b>	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit	
<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>	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: EDC-CT	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-2
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: Once per year	
Averaging Period: N/A	
Deviation Limit: Opacity shall not exceed 15% averaged over a six-minute period for any source having a total flow rate greater than or equal to 100,000 acfm.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. 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.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

**Permit Shield**

**Permit Shield ..... 44**

### 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 ID No.	Group / Inclusive Units	Regulation	Basis of Determination
2C-C1	N/A	40 CFR Part 63, Subpart Q	The cooling tower has not operated with chromium-based water treatment chemicals on or after Sept. 8, 1994.
2C-C2	N/A	30 TAC Chapter 115, Vent Gas Controls	The vent gas stream does not contain any VOCs, as defined in 30 TAC 101.1, nor the category of VOCs in 115.121(c).
2C403A	N/A	30 TAC Chapter 115, Vent Gas Controls	The vent gas stream does not contain any VOCs, as defined in 30 TAC 101.1, nor the category of VOCs in 115.121(c)
2C403B	N/A	30 TAC Chapter 115, Vent Gas Controls	The vent gas stream does not contain any VOCs, as defined in 30 TAC 101.1, nor the category of VOCs in 115.121(c)
2C403C	N/A	30 TAC Chapter 115, Vent Gas Controls	The vent gas stream does not contain any VOCs, as defined in 30 TAC 101.1, nor the category of VOCs in 115.121(c).
2C412	N/A	30 TAC Chapter 115, Vent Gas Controls	The vent gas stream does not contain any VOCs, as defined in 30 TAC 101.1, nor the category of VOCs in 115.121(c)
6002A/B/C	N/A	40 CFR Part 60, Subpart NNN	A Group I process vent that is also subject to the provisions of 40 CFR 60, Subpart NNN is required to comply only with the provisions of 40 CFR 63 Subpart G.
6002A/B/C	N/A	40 CFR Part 60, Subpart RRR	A Group I process vent that is also subject to the provisions of 40 CFR 60, Subpart RRR is required to comply only with the provisions of 40 CFR 63 Subpart G.
6002C	N/A	30 TAC Chapter 111, Incineration	This unit does not meet the definition of an incinerator as defined in 101.1.

### 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 ID No.	Group / Inclusive Units	Regulation	Basis of Determination
6002C	N/A	40 CFR Part 60, Subpart E	This unit does not meet the definition of an incinerator as defined in 60.51.
C-601A/B	N/A	30 TAC Chapter 115, Vent Gas Controls	The vent gas stream does not contain any VOCs, as defined in 30 TAC 101.1, nor the category of VOCs in 115.121(c)
DC-102	N/A	40 CFR Part 60, Subpart NNN	A Group 1 process vent that is also subject to the provisions of 40 CFR Part 60, Subpart NNN is required to comply only with the provisions of 40 CFR Part 63, Subpart G.
DC-103	N/A	40 CFR Part 60, Subpart NNN	A Group 1 process vent that is also subject to the provisions of 40 CFR Part 60, Subpart NNN is required to comply only with the provisions of 40 CFR Part 63, Subpart G.
DC-104	N/A	40 CFR Part 60, Subpart NNN	A Group 1 process vent that is also subject to the provisions of 40 CFR Part 60, Subpart NNN is required to comply only with the provisions of 40 CFR Part 63, Subpart G.
DC-105	N/A	40 CFR Part 60, Subpart NNN	A Group 1 process vent that is also subject to the provisions of 40 CFR Part 60, Subpart NNN is required to comply only with the provisions of 40 CFR Part 63, Subpart G.
DR-101A	N/A	40 CFR Part 60, Subpart III	This reactor does not meet the definition of an air oxidation reactor as defined in 40 CFR 60.611.
DR-101A	N/A	40 CFR Part 60, Subpart RRR	A Group 1 process vent that is also subject to the provisions of 40 CFR Part 60, Subpart RRR is required to comply only with the provisions of 40 CFR Part 63, Subpart G.

### 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 ID No.	Group / Inclusive Units	Regulation	Basis of Determination
DR-101B	N/A	40 CFR Part 60, Subpart III	This reactor does not meet the definition of an air oxidation reactor as defined in 40 CFR 60.611.
DR-101B	N/A	40 CFR Part 60, Subpart RRR	A Group 1 process vent that is also subject to the provisions of 40 CFR Part 60, Subpart RRR is required to comply only with the provisions of 40 CFR Part 63, Subpart G.
DR-101C	N/A	40 CFR Part 60, Subpart III	This reactor does not meet the definition of an air oxidation reactor as defined in 40 CFR 60.611.
DR-101C	N/A	40 CFR Part 60, Subpart RRR	A Group 1 process vent that is also subject to the provisions of 40 CFR Part 60, Subpart RRR is required to comply only with the provisions of 40 CFR Part 63, Subpart G.
DT-255	N/A	40 CFR Part 63, Subpart VV	This facility does not control air emissions from oil or organic-water separators for which another subpart of 40 CFR 60, 61, 63 references.
DT-255B	N/A	40 CFR Part 63, Subpart VV	This facility does not control air emissions from oil or organic-water separators for which another subpart of 40 CFR 60, 61, 63 references.
DT-402A	N/A	40 CFR Part 60, Subpart Kb	A Group 1 or Group 2 storage vessel that is also subject to 40 CFR 60, Subpart Kb will comply only with 40 CFR 63, Subpart G.
DT-402B	N/A	40 CFR Part 60, Subpart Kb	A Group 1 or Group 2 storage vessel that is also subject to 40 CFR 60, Subpart Kb will comply only with 40 CFR 63, Subpart G.
DT-402C	N/A	40 CFR Part 60, Subpart Kb	A Group 1 or Group 2 storage vessel that is also subject to 40 CFR Part 60, Subpart Kb will

### 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 ID No.	Group / Inclusive Units	Regulation	Basis of Determination
			comply only with 40 CFR Part 63, Subpart G.
DT-407A	N/A	40 CFR Part 60, Subpart Kb	A Group 1 or Group 2 storage vessel that is also subject to 40 CFR 60, Subpart Kb will comply only with 40 CFR 63, Subpart G.
DT-407B	N/A	40 CFR Part 60, Subpart Kb	A Group 1 or Group 2 storage vessel that is also subject to 40 CFR 60, Subpart Kb will comply only with 40 CFR 63, Subpart G.
DV-101	N/A	40 CFR Part 60, Subpart Kb	A Group 1 or Group 2 storage vessel that is also subject to the provisions of 40 CFR part 60, subpart Kb is required to comply only with the provisions of this subpart.
DV-252	N/A	40 CFR Part 63, Subpart VV	The facility does not control air emissions from oil or organic-water separators for which another subpart of 40 CFR 60, 61, 63 references.
DV-252B	N/A	40 CFR Part 63, Subpart VV	The facility does not control air emissions from oil or organic-water separators for which another subpart of 40 CFR 60, 61, 63 references
EDC PLANT	N/A	40 CFR Part 61, Subpart F	The EDC Plant at Formosa produces EDC by direct chlorination; therefore, it does not meet the definition of an ethylene dichloride plant, as defined in 40 CFR 61.61.
EDC-CT	N/A	40 CFR Part 63, Subpart Q	The cooling tower has not operated with chromium-based water treatment chemicals on or after Sept. 8, 1994.
EP4	N/A	30 TAC Chapter 115, Degreasing Processes	The Formosa Point Comfort Complex is not located in the BPA, DFW, El Paso, or HGA areas, or in Gregg, Nueces, Victoria, Bexar,

### 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 ID No.	Group / Inclusive Units	Regulation	Basis of Determination
			Comal, Guadalupe, Wilson, Bastrop, Caldwell, Hays, Travis, and Williamson Counties.
EP4	N/A	40 CFR Part 63, Subpart T	This degreaser does not use a hazardous air pollutant (HAP) solvent, or any combination of halogenated HAP solvents, in total concentration greater than 5 % by weight.
GRP-INCINERATE	6002A, 6002B	30 TAC Chapter 111, Incineration	This unit does not meet the definition of an incinerator as defined in 101.1.
GRP-INCINERATE	6002A, 6002B	40 CFR Part 60, Subpart E	This unit does not meet the definition of an incinerator as defined in 60.51.
HE LOADING	N/A	40 CFR Part 63, Subpart F	Per §63.100(f)(10), emission points that under a vapor balance are not subject to the requirements of Part 63, Subparts F, G and H.
HE LOADING	N/A	40 CFR Part 63, Subpart G	The loading operation utilizes a vapor balance.
MC-521	N/A	30 TAC Chapter 115, Vent Gas Controls	This vent gas stream does not contain any VOCs as defined in 30 TAC 101.1 or 30 TAC 115.121(c).
MC-531	N/A	30 TAC Chapter 115, Vent Gas Controls	This vent gas stream does not contain any VOCs as defined in 30 TAC 101.1 or 30 TAC 115.121(c).
MC-551A	N/A	30 TAC Chapter 115, Vent Gas Controls	This vent gas stream does not contain any VOCs as defined in 30 TAC 101.1 or 30 TAC 115.121(c).
MC-551B	N/A	30 TAC Chapter 115, Vent Gas Controls	This vent gas stream does not contain any VOCs as defined in 30 TAC 101.1 or 30 TAC 115.121(c).

**New Source Review Authorization References**

**New Source Review Authorization References ..... 50**

**New Source Review Authorization References by Emission Unit ..... 51**

### 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.: PSDTX1238	Issuance Date: 01/30/2025
<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.: 19167	Issuance Date: 12/03/2025
Authorization No.: 19199	Issuance Date: 01/30/2025
Authorization No.: 176849	Issuance Date: 07/18/2024
<b>Permits By Rule (30 TAC Chapter 106) for the Application Area</b>	
Number: 106.261	Version No./Date: 12/24/1998
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 12/24/1998
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.264	Version No./Date: 09/04/2000
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.373	Version No./Date: 09/04/2000
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.476	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**
2C-C1	COOLING TOWER	19199, PSDTX1238
2C-C2	COOLING TOWER	19199, PSDTX1238
2C403A	HCl ABSORBER TRAIN A	19167
2C403B	HCl ABSORBER TRAIN B	19167
2C403C	HCl ABSORBER TRAIN C	106.261/11/01/2003, 106.262/11/01/2003
2C412	C12 ROUTINE VENT SCRUBBER	19167
6002A	INCINERATOR A	19199, PSDTX1238
6002A/B/C	THREE INCINERATOR/SCRUBBER	19167, 19199, PSDTX1238
6002B	INCINERATOR B	19199, 176849, PSDTX1238
6002C	INCINERATOR C	19199, PSDTX1238
C-601A/B	C12 EMERGENCY SCRUBBER	19167
DC-102	EDC LE COLUMN	19199, PSDTX1238
DC-103	EDC HE COLUMN	19199, PSDTX1238
DC-104	EDC RECOVERY COLUMN	19199, PSDTX1238
DC-105	EDC HCl STRIPPING COLUMN	19199, PSDTX1238
DR-101A	EDC LTDC REACTOR A	19199, PSDTX1238
DR-101B	EDC LTDC REACTOR B	19199, PSDTX1238
DR-101C	EDC LTDC REACTOR C	19199, PSDTX1238
DT-255	DT-255 WASTE WATER TANK	19199, PSDTX1238
DT-255B	DT-255B WASTE WATER TANK	19199, PSDTX1238
DT-402A	WET CRUDE EDC TANK	19199, PSDTX1238

**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**
DT-402B	WET STORAGE EDC	19199, PSDTX1238
DT-402C	WET CRUDE ETHYLENE DICHLORIDE (EDC) TANK	106.261/11/01/2003, 106.262/11/01/2003, 106.476/09/04/2000
DT-407A	HEAVY ENDS TANK	19199, PSDTX1238
DT-407B	HEAVY ENDS TANK	19199, PSDTX1238
DV-101	EDC BUFFER TANK	106.261/12/24/1998, 106.262/12/24/1998
DV-252	WASTEWATER TANK (VESSEL)	19199, PSDTX1238
DV-252B	WASTEWATER TANK (VESSEL)	19199, PSDTX1238
EDC PLANT	EDC PLANT	19199, PSDTX1238
EDC-CT	COOLING TOWER	19199, PSDTX1238, 106.371/09/04/2000
EDCFUG	EDC PROCESS FUGITIVES	19167, 19199, PSDTX1238
EP4	EDC UNIT DEGREASER	19199, PSDTX1238
HE LOADING	HEAVY ENDS TRUCK LOADING	19199, PSDTX1238
MC-521	HCL VENT SCRUBBER	19167
MC-531	HCL VENT SCRUBBER	106.472/09/04/2000
MC-551A	HCL VENT SCRUBBER	106.472/09/04/2000
MC-551B	HCL VENT SCRUBBER	106.472/09/04/2000

\*\*This column may include Permit by Rule (PBR) numbers and version dates, PBR Registration numbers in brackets, Standard Permit Registration numbers, Minor NSR permit numbers, and Major NSR permit numbers.

**Alternative Requirement**

**Alternative Requirement..... 54**

Bryan W. Shaw, Ph.D., J.E., Chairman  
Toby Baker, Commissioner  
Jon Niemann, Commissioner  
Richard A. Hyde, J.E., Executive Director



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

December 14, 2016

MR RICK CRABTREE  
ASSISTANT GENERAL MANAGER  
FORMOSA PLASTICS CORPORATION TEXAS  
PO BOX 700  
POINT COMFORT TX 77978-0700

Re: Alternative Method of Compliance (AMOC) No. 66  
Alternative Monitoring For Cooling Towers  
Formosa Point Comfort Plant  
Regulated Entity Number: RN100218973  
Customer Reference Number: CN600130017  
Associated Permit Numbers: 7699, 19166, 19167, 19168, 19198, 19199, 19200, 19201,  
20203, 40157, 76044, 76305, 91780, 107518, 107520, 127838, 128752, HAP10,  
PSDTX1053, PSDTX1058, PSDTX1222, PSDTX1224, PSDTX1226, PSDTX1232,  
PSDTX1234, PSDTX1237, PSDTX1238, PSDTX1240, PSDTX1383, PSDTX1384,  
PSDTX226M7, PSDTX760M9, O1484, O1951, O1953, O1954, O1956, O1957, O1958,  
O3409, and O3421

Dear Mr. Crabtree:

This correspondence is in response to Formosa Plastics Corporation, Texas's (Formosa's) request for Alternative Monitoring for all cooling towers (CT) at the Formosa Point Comfort Plant. The AMOC is used to comply with requirements for sampling and analysis of VOCs in cooling tower feed water and makeup water.

We understand that Formosa is requesting clarification and confirmation of the alternative VOC sampling procedure for all authorized CT at the site installed on similar product processes (see Attachment 1). This alternative method was previously approved for Formosa on December 2, 1992, January 11, 1996, and August 1997.

The alternative VOC sampling (referenced in historical correspondence as FPC TX VOC IN WATER AND WASTEWATER) is equivalent to Test Method 8020A. The method is detailed in Attachment 2 and should provide representative concentrations of non-methane hydrocarbons to comply with the above-referenced permits. This alternative method does not apply to any requirements that may in 40 Code of Federal Regulations Part 60, New Source Performance Standards (NSPS), 40 Code of Federal Regulations Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAP), or 40 Code of Federal Regulations Part 63, Maximum Achievable Control Technology (MACT) Standards for Hazardous Air Pollutants.

December 14, 2016  
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Mr. Rick Crabtree

Re: AMOC #66

The Texas Commission on Environmental Quality (TCEQ) Executive Director has made a final decision to approve your AMOC request. You are reminded that approval of any AMOC shall not abrogate the Executive Director or Administrator's authority under the Act or in any way prohibit later canceling the AMOC.

This AMOC approval may supersede certain requirements or representations in Permit Nos. 7699, 19166, 19167, 19168, 19198, 19199, 19200, 19201, 20203, 40157, 76044, 76305, 91780, 107518, 107520, 127838, 128752, HAP10, PSDTX1053, PSDTX1058, PSDTX1222, PSDTX1224, PSDTX1226, PSDTX1232, PSDTX1234, PSDTX1237, PSDTX1238, PSDTX1240, PSDTX1383, PSDTX1384, PSDTX226M7, and PSDTX760M9. To ensure effective and consistent enforceability, we request that Formosa incorporate this AMOC into the permit(s) through submittal of alteration(s) no later than 90 days after this approval, if not already included.

This approval may also change applicable requirements for the site, which are identified in the site operating permits (SOP) O1484, O1951, O1953, O1954, O1956, O1957, O1958, O3409, and O3421. The TCEQ recommends the submittal of a SOP administrative revision if any changes are necessary. Changes meeting the criteria for an administrative revision can be operated before issuance of the revision if a complete application is submitted to the TCEQ and this information is maintained with the SOP records at the site.

If you need further information or have any questions, please contact Ms. Anne Inman, P.E. at (512) 239-1276 or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,



Michael Wilson, P.E., Director  
Air Permits Division  
Office of Air  
Texas Commission on Environmental Quality

cc: Air Permits Section Chief, New Source Review Section (6PD-R), U.S. Environmental Protection Agency, Region 6, Dallas

Project Number: 255808

bcc: Air Section Manager, Region 14 - Corpus Christi  
Rebecca Pardee, Manager, Chemical Section, Air Permits Division, OA: MC-163

**Attachment 1 – Summary of Cooling Towers and Authorizations**

<b>Permit No.</b>	<b>Type of Process</b>	<b>Plant</b>	<b>EPNs</b>	<b>Previous Approval</b>
19166, HAP10, P8DTX760M9, O1951	Inorganic	Utilities Plant	Not Identified on MAERT	12/2/1992
19167, O1953	Inorganic	Caustic Chlorine Plant	Not Identified on MAERT (shares with EDC-CT)	1/11/1996
76044, P8DTX1053, O3421	Inorganic	Pet Coke / Coal Fired Generation	CT-1 through CT-12	N/A
19168, P8DTX1226, O1958	Organic Olefins	Olefins I Olefins II GHU PPU FRACII	1010 1064 8801U  FRACII-CT	N/A
107518, P8DTX1383 SOP PENDING	Organic Olefins	Olefins III PDH	OL3-CTWR PDH-CWTR	N/A
19201, P8DTX1232 O1957	Organic Polyolefins	HDPE I	PO-CT	1/11/1996
40157, P8DTX1222 O1957	Organic Polyolefins	HDPE II	PP2-CT	N/A
20203, P8DTX1224 O1957	Organic Polyolefins	LLDPE	LL-CT	12/2/1992
107520, P8DTX1384 SOP PENDING	Organic Polyolefins	LDPE	LD-CT	N/A
19200, P8DTX1237, O1956	Organic Polyolefins	Polypropylene I Plant (PP I)	PO-CT PP1-CT	1/11/1996
91780, P8DTX1240 O1956	Organic Polyolefins	PP II	PP20CT	N/A
127838 SOP PENDING	Organic Polyolefins	HDPE 3	PE3-12	N/A
19199, P8DTX1238 O1953	Organic Other	Ethylene Dichloride (EDC)	2C-C1 2C-C2 EDC-CT	
7699, P8DTX226M7 O1954	Organic Other	EDC Cracking, VCM, PVC	999 VW-C02 VW-C11	12/2/1992
19198, P8DTX1234 O1484	Organic Other	Ethylene Glycol (EG)	EG-CT	8/1997
128752 SOP PENDING	Organic Other	EG 2	EG2-CT	N/A
76305, P8DTX1058 O3409	Organic Other	Specialty PVC	CT-01	N/A

Mr. Wilson  
June 11, 2013

---

*Attachment 2*

VOC in Water and Wastewater by TACB-VOC Method Procedure

## LABORATORY STANDARD OPERATING PROCEDURES

### VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD

Revision Number 5

#### 1.0 PURPOSE \*

In an effort to maintain Quality, Efficiency, Safety, and Environmental Responsibility, this procedure has been developed for L.S. & Q.A. Department Operation.

#### 2.0 SCOPE \*

This method is for the analysis of water and wastewater samples containing volatile organic compounds (VOC) and non-methane hydrocarbons (NMHC). It is intended for analyzing treated and un-treated water and wastewater streams permitted in FPC expansion complex.

This method can be used to quantitate volatile organic compounds that have boiling points less than 200°C and are insoluble or slightly soluble in water.

#### 3.0 ORGANIZATIONS AFFECTED

This procedure affects operation within the L.S. & Q.A. Department and any other department that may request this analysis.

#### 4.0 RESPONSIBILITIES

Personnel	Responsibility
Management/Supervision	Responsible for development and implementation of the procedure, training material, and training of subordinates
QA/QC	Responsible for auditing the performance of the procedure.
Lab Technician	Responsible for knowing and performing analysis per procedure.

#### 5.0 DEFINITIONS

**VOC** *Volatile Organic Compounds (VOC)* are organic compounds that have boiling points approximately less than 200°C.

#### 6.0 KEY POINTS

Not applicable

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## LABORATORY STANDARD OPERATING PROCEDURES

## VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD

Revision Number 5

## 7.0 POLICIES \*

This procedure has been developed to insure adherence to FPC Quality, Environmental, Health, and Safety Policies, FPC Corporate Total Quality Management Policies, L.S. & Q.A. Department Quality Management Plan and L.S. & Q.A. Department Quality Assurance Project Plan.

## 8.0 GUIDELINES

<i>Summary</i>	Volatile organic compounds (VOC) are extracted from sample by purge and trap techniques. Stripped sample components are swept to the gas chromatograph inlet where the individual components are detected using a flame ionization detector. The resultant peaks are summed and quantitated against external calibration curve constructed using benzene as a standard.
<i>Interferences</i>	Major contaminate peaks are volatile materials in the laboratory and impurities in the inert purging or carrier gas. A trip blank prepared from organic-free reagent water and carried through the sampling and handling protocol can serve as a check for any possible contamination of sample.
<i>Safety Considerations</i>	The use of proper gloves, safety glasses, and PRC should be exercised when using reagents. Exercise caution when working with glassware. Wipe any spills, clean area immediately and dispose of properly. Avoid skin or eye contact, inhalation or ingestion. Do not operate instrument without all protective equipment in place.
<i>Sample Collection and Storage</i>	<ul style="list-style-type: none"> <li>- Water sample are collected in 40mL vial with a Teflon-lined septum and an open top screw-cap. Two vials per sampling event must be collected at a minimum per sample point. The containers must be filled in such manner that no air bubbles pass through the sample as the container is being filled. Should bubbling occur, the sample must be poured out and the vial refilled. Seal the vial so that no air bubbles are entrapped in it.</li> <li>- Due to differing solubility and diffusion properties of gases in liquid matrices at different temperatures, it is possible for the sample to generate some headspace during storage. This headspace will appear in the form of micro-bubbles, and should not invalidate a sample for volatile analysis.</li> <li>- The presence of a macro-bubble, generally indicates either improper sampling technique or a source of gas evolution within the sample. Studies conducted by the USEPA (EMSL-CI, unpublished data) indicate that "pea-sized" bubbles (i.e. diameter &lt; 1/4 in.) did not adversely affect volatiles data. These bubbles were generally encountered in wastewater samples, which are more susceptible to variations in gas solubility than are groundwater samples.</li> </ul>

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## LABORATORY STANDARD OPERATING PROCEDURES

## VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD

<i>Sample Collection, Preservation, Containers, and Holding Times</i>				Revision Number 5
Container <sup>ⓐ</sup>	Minimum Sample Size (mL)	Sample Type <sup>ⓑ</sup>	Preservation <sup>Ⓒ</sup>	Maximum Storage, Recommended/Regulatory <sup>ⓓ</sup>
G-TLC	40	G,C	Refrigerated at 4°C	7 days

- ⓐ G-TLC = glass with Teflon-lined cap.
- ⓑ G = grab; C = composite.
- Ⓒ Refrigerate - Storage at 4°C, in the dark.
- ⓓ Reference 4

*Apparatus and Equipment*

1. Gas Chromatograph/Detector/Data System
  - a. Gas Chromatograph - Agilent model 6890 or model 5890 (as back up)
  - b. The GC must be equipped with a Agilent flame ionization detector (FID) or equivalent
  - c. The recommended data system is a Agilent Chemstation (or equivalent)
  - d. The GC column used for this determination is a J&W DB-5 column. The dimensions of the column are 30 m x 0.53 mm ID x 1.50 um film thickness.
2. Purge-and-Trap - An OI Analytical 4560 purge-and-trap or equivalent is recommended. The trap will be constructed of stainless tubing and filled with 2,6-diphenylene oxide polymer (Tenax GC or equivalent), methyl silicon packing, silica gel, and coconut charcoal. Alternatively, hydrophobic carbon molecular sieve and graphitized carbon black materials may be substituted if equivalent or increased method sensitivity can be demonstrated.  
An OI 4551A autosampler is configured to the purge-and-trap to allow for automated analysis.
4. Gas-Tight Microsyringes; 10, 25, 100, 250, 1000  $\mu$ L sizes
5. 40 mL VOA (volatile organic analysis) vials with Teflon faced septa

*Reagents*

1. Organic-free reagent water (18.2 ohm-cm Millipore water)
2. Certified 2.0 mg/ml benzene standard in methanol solvent for initial calibration verification. Accustandard stock number M502-01-10X
3. Methanol, Pesticide quality or equivalent
4. Certified 1.0 mg/ml Benzene Standard in methanol solvent for calibration. Accustandard stock number AS-E0004

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**LABORATORY STANDARD OPERATING PROCEDURES**  
**VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD**

Revision Number 5

*QC Requirements*

QC	DESCRIPTION	FREQUENCY	CRITERIA	CORRECTIVE ACTION
MB	Method blank; Organic-free reagent water	1/10 sample	< 20 ppb Which is the amount of the lowest std.	Investigate system contamination; correct the problem and reanalyze the samples.
ICV	Initial Calibration verification, Benzene: 100 ppb.	1/10 sample	20% deviation from actual value. (80 ppb-120 ppb)	Check instrument malfunction. Correct the instrument problem and reanalyze. Perform initial calibration after the third failure.

*Calculations*

Deviation(%)

$$D = \frac{|X - T|}{T} \times 100$$

Where, D = percent deviation  
 X = the observed value for the measurement  
 T = "actual" value for the measurement

*Precision and Accuracy*

None

*Reporting*

- Analytical reporting limit is 20 ppb (ug/L).
- All verified results must be entered in LIMS and/or the appropriate non-routine log sheet upon completion.
- For the purpose of reporting to applicable agencies, preliminary results from LIMS may be used to prevent greater than 48hr delay in reporting time.

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## LABORATORY STANDARD OPERATING PROCEDURES

## VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD

Revision Number 5

## 9.0 PROCEDURES\*

9.1 *Standard Preparation*9.1.2 Calibration Standards

Fill 40 mL VOA vials with reagent water, taking care not to trap any air in the vial. Add the Calibration Standard (AS-B0004) to the vial using a clean microsyringe basing on following list to prepare the calibration standards:

	Blank	Stock solution
		0.0 uL
	20 ppb	0.8 uL
	50 ppb	2.0 uL
	100 ppb	4.0 uL
	250 ppb	10.0 uL
	500 ppb	20.0 uL
	1000 ppb	40.0 uL

9.1.3 **Initial Calibration Verification Standard:** Upon opening the certified benzene standard (e.g. M502-01-10X), transfer to a 1 mL reaction vial and cap with a syringe valve. This standard may be good up to 6 months, but should be replaced if ICV fails. Fill a 40 mL VOA vial with Reagent water, taking care not to trap any air in the vial. Add 2.0 uL to the vial using a clean microsyringe for a 100 ppb std.

9.1.4 All standard preparation activities must be logged in the standards logbook.

9.2 *Instrument Setup*

9.2.1 GC/FID is configured as follows:

Inlet

Mode: split Gas: Helium  
 Heater: 250 °C  
 Pressure: 6.9 psi  
 Total Flow: 102 mL/min  
 Split ratio: 9:1  
 Split Flow: 90 mL/min

Column

Mode: Const Pressure  
 Pressure: 6.9 psi  
 Flow: 10.0 mL/min  
 Average Velocity: 66 cm/sec.

Department, I.S. &amp; Q.A.

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## LABORATORY STANDARD OPERATING PROCEDURES

## VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD

Revision Number 5

Oven:

Setpoint: 50 °C

Oven Maximum: 300 °C

Equilibration: 0.5 min

Oven Ramp	°C/min	Next °C	Hold min	Run time
Initial		50	2.00	2.00
Ramp 1	20.00	250	9.00	16.00
Post Run		50	0	16.00

Detector:

Heater: 230 °C

H<sub>2</sub> flow 40.0 mL/min

Air Flow 450 mL/min

Makeup Flow (He): 25.0 mL/min

Flame: On

## 9.2.2 Purge-and-Trap (OI 4560):

Purge flow	35 mL/min
Purge	11 min at 25 °C
Desorb	2 min at 180 °C
Bake	10 min at 185 °C
Transfer line	100 °C
Valve	100 °C
Sample size	5 mL
Drypurge	1 min

9.3 *Re-Calibration*

9.3.1 Recalibration is recommended once a year or when new ICV fails 20% recovery. Prior to re-calibration, GC and samplers must be baked out. Raise the GC oven temp to 250°C and bake for at least 30 min. It is also necessary to cycle the purge-and-trap through one bake cycle to ensure that there are no contaminants present in the trap. After 30 min lower GC temp to 50°C.

9.3.2 Prepare the calibration standards as outlined in 9.1.2 just prior to analysis. Load the standard vials in the correct slots of the autosampler and prepare following re-calibration sequence in the Method and Run control window of the ChemStation Software. Start the sequence by following steps from 9.4.4 to 9.4.9.

## LABORATORY STANDARD OPERATING PROCEDURES

## VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD

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## Re-calibration sequence:

Line	Vial	Sample Name	Method Name	Inj/Vial	Sample Type	Cal Level	Update RF	Update RT
1	1	MB (Blank)	TACB-VOC	1	Sample			
2	1	20 ppb	TACB-VOC	1	Calibration	1	Replace	No Update
3	1	50 ppb	TACB-VOC	1	Calibration	2	Replace	No Update
4	1	100 ppb	TACB-VOC	1	Calibration	3	Replace	Replace
5	1	250 ppb	TACB-VOC	1	Calibration	4	Replace	No Update
6	1	500 ppb	TACB-VOC	1	Calibration	5	Replace	No Update
6	1	1000 ppb	TACB-VOC	1	Calibration	6	Replace	No Update

- 9.3.3 In the data analysis window of the Chemstation Software, load the chromatogram for the blank (reagent water). Check to see that there are no contamination peaks. For some low level analysis, a small peak will show at the beginning of the run. This is due to a pressure change on column when the sampler injects. If a calibration exists, the run should read less than two times the lower analytical limit for the analysis.
- 9.3.4 Open the calibration file and check to see that there are only two significant peaks. The first peak will be the solvent or methanol peak. The peaks should be sharp with minimum tailing. If there are more than two peaks, the calibration stock or reagent water is contaminated. Correct this condition and begin the calibration again.
- 9.3.5 Once the calibration files are integrated, the results must be assembled in a linear calibration curve. Display the calibration curve and check that the fit is at least  $R^2 > 0.990$ . Calculate a new area reject from the Calibration curve plot "AREA= number value x amount + 0" (the number value is the slope of the calibration curve. The amount is 20). Enter this new area into the integration events table in the value line for area reject.
- 9.3.6 Calibration should be set to calculate uncalibrated peaks using compound benzene. The parameters should sum all the individual peak areas of chromatogram.
- 9.4 **Sample Analysis**
- 9.4.1 **Composite sample:** A volumetric composite is performed by combining the chilled (4°C) samples collected during a weeklong sampling event in a chilled jar that is surrounded by ice. This must be performed quickly to prevent loss of volatile component. The sample is mixed and transferred to 40mL VOA.

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## LABORATORY STANDARD OPERATING PROCEDURES

### VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD

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Note: The volumetric composite may not reflect the true emissions over a week long period due to fluctuations in flow rate of the stream to be tested.

- 9.4.2 For grab samples, directly use the vial that the sample was received in.
- 9.4.3 Load the samples in the autosampler racks noting their positions.
- 9.4.4 Bring up the window P & T 6890C (online): Method & Run control by Click Start / Program/HP Chemstation /Instrument online if it is not opened on the computer monitor.
- 9.4.5 Click Sequence/Load Sequence to load an existing sequence.
- 9.4.6 Click Sequence/Sequence Parameter to change the Subdirectory to today's date.
- 9.4.7 Click Sequence/Sequence Table to edit the sequence at the data station.  
Enter the sample information in a sequence file located in the data station. Be sure that the vial positions correspond with vial locations and the correct method is chosen for the analysis

Following sequence table is an example:

Line	Vial	Sample Name	Method Name	Inj/Vial	Sample Type
1	1	MB(Blank)	TACB-VOC	1	Sample
2	1	ICV	TACB-VOC	1	Sample
3	1	OL1 CWR 2/5	TACB-VOC	1	Sample
4	1	OL1 CWR 2/5	TACB-VOC	1	Sample
5	1	OL2 CWR 2/8	TACB-VOC	1	Sample
6	1	OL2 CWR 2/8	TACB-VOC	1	Sample
7	1	GHU CWR 2/5	TACB-VOC	1	Sample
8	1	GHU CWR 2/5	TACB-VOC	1	Sample
9	1	T971 2/1-2/7	TACB-VOC	1	Sample
10	1	3T971 2/1-2/7	TACB-VOC	1	Sample
11	1	CWTP 2/1-2/7	TACB-VOC	1	Sample
12	1	LLDPE CWR 2/5	TACB-VOC	1	Sample
13	1	MB	TACB-VOC	1	Sample
14	1	ICV	TACB-VOC	1	Sample
15	1	Sample A	TACB-VOC	1	Sample
16	1	Sample B	TACB-VOC	1	Sample

Note: Method blank and calibration verification need be run every 10 samples.

- 9.4.8 Press Run Sequence button. Now system is ready and waiting for Purge-and-trap device to start.
- 9.4.9 Purge-and-trap device preparation:  
 (1) Push SPL Button on the front panel, the window will show: L551 start: end:  
 (2) Set the start and end positions that need match with actual sample position and run sequence, use arrow ON button and OFF button to switch between start and end, then use keypad to key in position number.

## LABORATORY STANDARD OPERATING PROCEDURES

### VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD

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(3) Press Enter key, then press Clear button, then press Start button to run the sequence.

- 9.4.10 Once data have been generated, check that the chromatograms have been integrated correctly. Samples that are 10 % out of the analytical range for the determination must be diluted and re-analyzed using the appropriate methodology (See table 1).

#### 10.0 TRAINING REQUIREMENTS \*

Personnel who perform this analysis will be required to complete the following training requirements:

Period	Requirement
Initial	SOP Training, Test, and Job Qualification
Annual Refresher and Procedure Revision	SOP Training and Test
Audit Finding	SOP Training, Test, and Job Qualification

#### 11.0 FLOWCHART

Not applicable

#### 12.0 REFERENCES

1. "Guidelines for preparation of Policies, Guidelines, and Procedures," FPC TQM Manual.
2. Test Method for Evaluating Solid Waste (SW-846), "Determinative Chromatographic Separations," Revision 3, March 2003, Method 8000C.
3. Test Method for Evaluating Solid Waste (SW-846), "purge and Trap for Aqueous Samples," Revision 3, May 2003, Method 5030C.
4. Test Method for Evaluating Solid Waste (SW-846), "Organic Analytes," Revision 4, February 2007, Chapter Four, Sec. 4.1. (for sample storage)

#### 13.0 RECORD RETENTION PERIOD

Records produced using this procedure will be retained for a period of no less than 5 years.

#### 14.0 ATTACHMENTS

Table 1  
Figure 1: Chromatogram of Calibration Standard and sample run  
Attachment 1: TNRC Approval Letter.

Department: L.S. &amp; Q.A.

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**LABORATORY STANDARD OPERATING PROCEDURES**  
**VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD**

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TABLE 1. Examples of sample dilution

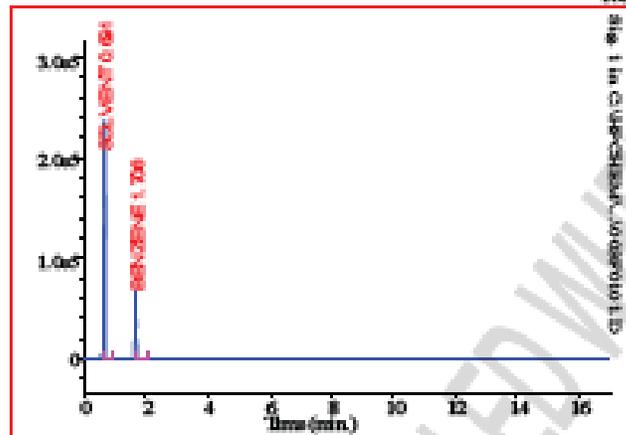
Add the required amount of high concentration sample to a 50 mL volumetric flask, and then bring level to exact 50 mL with organic-free reagent water.

Dilution factor	High concentration sample	Total volume
30000	1.67 $\mu$ L	50 mL
20000	2.5 $\mu$ L	50 mL
10000	5 $\mu$ L	50 mL
5000	10 $\mu$ L	50 mL
4000	12.5 $\mu$ L	50 mL
3000	16.7 $\mu$ L	50 mL
2000	25 $\mu$ L	50 mL
1000	50 $\mu$ L	50 mL
500	100 $\mu$ L	50 mL
400	125 $\mu$ L	50 mL
300	167 $\mu$ L	50 mL
200	250 $\mu$ L	50 mL
100	500 $\mu$ L	50 mL
90	556 $\mu$ L	50 mL
80	625 $\mu$ L	50 mL
70	714 $\mu$ L	50 mL
60	833 $\mu$ L	50 mL
50	1 mL	50 mL
40	1.25 mL	50 mL
30	1.67 mL	50 mL
20	2.5 mL	50 mL
10	5 mL	50 mL
5	10 mL	50 mL
2	25 mL	50 mL

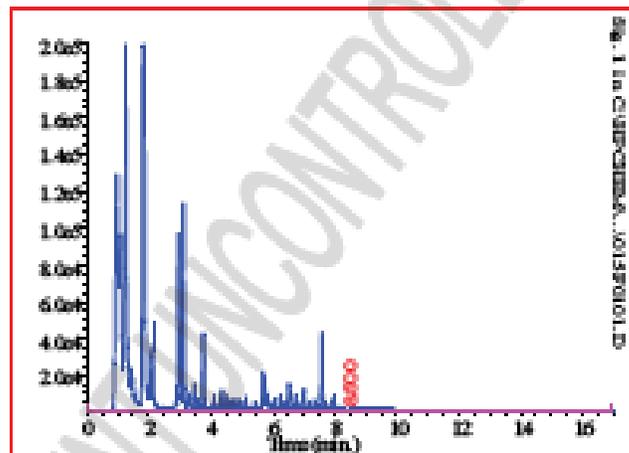
Figure 1: Sample Chromatogram  
 Calibration Standard Run

**LABORATORY STANDARD OPERATING PROCEDURES**  
**VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD**

Revision Number 5



Sample Run



Attachment 1: TNRCC Approval Letter

The next page is a copy of the approval letter from the TNRCC.

**LABORATORY STANDARD OPERATING PROCEDURES**  
**VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD**

Revision Number 5

John Hill, Chairman  
 Pam Reed, Commissioner  
 R. H. "Poloh" Harpaz, Commissioner  
 Dan Parsons, Executive Director



**TEXAS NATURAL RESOURCE CONSERVATION COMMISSION**

*Protecting Texas by Reducing and Preventing Pollution*

January 11, 1996

Mr. Matt Brittan  
 Technical Department  
 Formosa Plastics Corporation  
 Post Office Box 700  
 201 Formosa Drive  
 Point Comfort, Texas 77978

RE: Revisions to the Testing Techniques for Sampling Wastewater and Polyolefin Powder  
 Required by the Texas Natural Resource Conservation Commission (TNRCC)  
 Permit Nos.: 19167, 19168, 19198, 19199, 19200, 19201, 20203  
 PSD-TX Permit No. 760M3

Dear Mr. Brittan:

This is in response to your letter dated November 7, 1995, which was related to the proposed procedures for analyzing the volatile organic compound (VOC) content in wastewater and polyolefin powder.

On June 6, 1995, Formosa Plastics Corporation (Formosa) proposed revisions to a TNRCC approved procedure for analyzing the VOC content in wastewater and polyolefin powder. In a letter dated August 29, 1995, the TNRCC stated multiple concerns related to the proposed analytical revisions. These concerns centered around the operational parameters of the gas chromatograph which was proposed for the required analysis. In the letter dated November 7, 1995, Formosa supplied additional information and comments addressing these issues. After reviewing the information, the TNRCC has determined that Formosa Plastics adequately addressed the concerns and hereby accepts the proposed VOC sampling and analysis plan as written.

If you have questions, please contact me at (512) 239-1740.

Sincerely,

  
 Terry L. Hodgett  
 Case Team, Engineering Services Section  
 Enforcement Division

cc: Mr. Charles Spasochan, Regional Air Program Manager, Corpus Christi

F.D. 006 12667 • Austin, Texas 78711-0887 • 810/389-1900

Department: L.S. & Q.A.

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**LABORATORY STANDARD OPERATING PROCEDURES**  
**VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD**

Revision Number 5

**TEXAS AIR CONTROL BOARD**  
 1102 PARK WINDTOWER, AUSTIN, TEXAS 78741-9128-1841

**SUN PILLAY**  
 CHIEF  
 DEPARTMENT  
 EXECUTIVE  
 WILLIAM C. CASTLE  
 EXECUTIVE DIRECTOR



**THE CHAIRMAN**  
 WILLIAM C. CASTLE  
 EXECUTIVE DIRECTOR  
 WILLIAM C. CASTLE  
 C. H. JONES  
 WILLIAM C. CASTLE  
 WILLIAM C. CASTLE

December 2, 1992

Mr. John T. Hyak  
 Environmental Department  
 Formosa Plastics Corporation, Texas  
 P.O. Box 700  
 201 Formosa Drive  
 Point Comfort, Texas 77978

RE: Sampling Procedures for Determination of Volatile Organic Compounds (VOC) in Polyethylene Powder/Pellets, Process Wastewater, and Cooling Tower Water Supplemental Measurement Procedure for Continuous Emission Monitoring Systems (CEMS) Failures Under Texas Air Control Board (TACB) Permits 19166, 19199, and 20203.

Dear Mr. Hyak:

Your letter dated November 2, 1992, in which you requested a review of the sampling methods and supplemental measurements listed above, has been given to me for review and reply.

The method proposed for determining VOC content in polyethylene powder and pellets parallels the "Beverage Can Method" that is currently accepted for use in Texas. There are several minor substitutions in analytical equipment but, after reviewing these substitutions with Mr. Jim Lindgren of the TACB Organic Analysis Laboratory, it was determined that the substitutions should not have a significant bias on the reported data.

The method proposed for determining VOC content in cooling tower water parallels the U. S. Environmental Protection Agency Method 820A. After comparing the two methods, there were no major deviations identified that would significantly bias the reported data.

In a letter dated October 3, 1992, addressed to Ms. Brittain of your staff, I requested several procedure modifications to the supplemental measurement procedure for CEMS failures. After reviewing the revised procedures submitted by Mr. Brittain, I find the revised procedures to be acceptable as written.

 *Texas working for clean air*

**LABORATORY STANDARD OPERATING PROCEDURES**  
**VOC IN WATER AND WASTEWATER BY TACB-VOC METHOD**

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Revision Number 5

Mr. John T. Hynk

-2-

December 2, 1992

As long as these methods are performed correctly, they should produce reliable and accurate data. Permission is hereby granted to use these methods as proposed. The TACB reserves the right to direct Formosa Plastics Corporation, Texas to revise and/or change any or all of these methods if the TACB deems necessary. There are new, more reliable methods and advances in technology constantly being developed, and these methods may, someday, become obsolete in comparison.

Sincerely,



Terry L. Blodgett, Engineering Assistant  
Source Review Section  
Source and Mobile Monitoring Division

cc: Mr. Matt Britain, Technical Department, Formosa Plastics Corporation, Texas  
Mr. Jim Lindgren, Chief, Organic Analysis Laboratory

**Appendix A**

**Acronym List ..... 74**

## 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
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
COMS	continuous opacity monitoring system
CVS	closed vent system
D/FW	Dallas/Fort Worth (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
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
MACT	Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr	Million British thermal units per hour
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NESHAP	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
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
PEMS	predictive emissions monitoring system
PM	particulate matter
ppmv	parts per million by volume
PRO	process unit
PSD	prevention of significant deterioration
psia	pounds per square inch absolute
RO	Responsible Official
SIP	state implementation plan
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 ..... 76**

**Major NSR Summary Table**

Permit Number 19199 and PSDTX1238					Issuance Date: January 30, 2025		
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)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
EDCFUG	Process Fugitives (5)	Cl <sub>2</sub>	0.01	0.02	2, 3, 17, 19, 20	2, 3,17, 19, 20	2, 3
		HCl	0.01	0.01			
		VOC	2.56	11.22			
6002A/B/C	Three Incinerator/ Scrubbers (6)	Cl <sub>2</sub>	0.86	3.78	2, 3, 7, 8, 10, 11,13, 16, 22, 30, 36	2, 3, 7, 8, 10, 11, 13, 16, 22, 25, 36	2, 3, 22
		CO	2.18	9.54			
		CO (7)	9.00	-			
		PM	0.35	1.55			
		PM <sub>10</sub>	0.35	1.55			
		PM <sub>2.5</sub>	0.35	1.55			
		HCl	0.44	1.92			
		NO <sub>x</sub>	5.69	24.91			
		SO <sub>2</sub>	0.02	0.08			
		VOC	1.30	5.69			
EDC-CT	Cooling Tower T-001	VOC	0.53	1.74	16, 30	16	
		PM	10.30	21.69			
		PM <sub>10</sub>	2.39	7.87			

**Major NSR Summary Table**

Permit Number 19199 and PSDTX1238					Issuance Date: January 30, 2025		
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)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM <sub>2.5</sub>	0.01	0.04			
		Chlorine compounds	<0.01	0.01			
2C-C1	Cooling Tower DT-013	VOC	0.88	3.86	16, 30	16	
		PM	1.06	3.20			
		PM <sub>10</sub>	0.27	1.16			
		PM <sub>2.5</sub>	<0.01	<0.01			
		Chlorine compounds	<0.01	<0.01			
2C-C2	Cooling Tower DT-014	VOC	0.88	3.86	16, 30	16	
		PM	1.06	3.20			
		PM <sub>10</sub>	0.27	1.16			
		PM <sub>2.5</sub>	<0.01	<0.01			
		Chlorine compounds	<0.01	<0.01			
<b>Maintenance, Startup, and Shutdown (MSS)</b>							
EDC-MAINT	Emissions to Atmosphere	VOC	647.96	12.60	2, 3, 27, 28, 29, 30, 31, 32, 33, 35, 36	2, 3, 27, 28, 29, 30, 31, 32, 33, 35, 36	2, 3,
		HCl	19.28	2.30			
		Cl <sub>2</sub>	0.37	0.01			

- (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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
  - NO<sub>x</sub> - total oxides of nitrogen
  - SO<sub>2</sub> - sulfur dioxide
  - PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented
  - PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented
  - PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
  - CO - carbon monoxide
  - Cl<sub>2</sub> - chlorine
  - HCl - hydrogen chloride
  - Chlorine Compounds - hypochlorous acid and hydrogen chloride
- (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) This entry represents three separate emissions points. Emissions shown are the maximum allowable rates for the three incinerator/scrubber trains combined.
- (7) Hourly CO emission rate during Startup.



## Texas Commission on Environmental Quality Air Quality Permit

*A Permit Is Hereby Issued To*  
**Formosa Plastics Corporation, Texas**  
*Authorizing the Construction and Operation of*  
**Formosa Point Comfort Plant**  
*Located at Point Comfort, Calhoun County, Texas*  
*Latitude 28.6888 Longitude -96.5472*

Permits: 19199 and PSDTX1238

Amendment Date: January 30, 2025

Expiration Date: June 9, 2030

  
\_\_\_\_\_  
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 (TAC) Section 116.116 (30 TAC § 116.116)]<sup>1</sup>
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]
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)]
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 in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in 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)]<sup>1</sup>
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 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 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 "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.<sup>1</sup>

<sup>1</sup> Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.

## Common Acronyms in Air Permits

°C = Temperature in degrees Celsius	GLC <sub>max</sub> = maximum (predicted) ground-level concentration
°F = Temperature in degrees Fahrenheit	gpm = gallon per minute
°K = Temperature in degrees Kelvin	gr/1000scf = grain per 1000 standard cubic feet
µg = microgram	gr/dscf = grain per dry standard cubic feet
µg/m <sup>3</sup> = microgram per cubic meter	H <sub>2</sub> CO = formaldehyde
acfm = actual cubic feet per minute	H <sub>2</sub> S = hydrogen sulfide
AMOC = alternate means of control	H <sub>2</sub> SO <sub>4</sub> = sulfuric acid
AOS = alternative operating scenario	HAP = hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
AP-42 = Air Pollutant Emission Factors, 5th edition	HC = hydrocarbons
APD = Air Permits Division	HCl = hydrochloric acid, hydrogen chloride
API = American Petroleum Institute	Hg = mercury
APWL = air pollutant watch list	HGB = Houston/Galveston/Brazoria
BPA = Beaumont/ Port Arthur	hp = horsepower
BACT = best available control technology	hr = hour
BAE = baseline actual emissions	IFR = internal floating roof tank
bbl = barrel	in H <sub>2</sub> O = inches of water
bbl/day = barrel per day	in Hg = inches of mercury
bhp = brake horsepower	IR = infrared
BMP = best management practices	ISC3 = Industrial Source Complex, a dispersion model
Btu = British thermal unit	ISCST3 = Industrial Source Complex Short-Term, a dispersion model
Btu/scf = British thermal unit per standard cubic foot or feet	K = Kelvin; extension of the degree Celsius scaled-down to absolute zero
CAA = Clean Air Act	LACT = lease automatic custody transfer
CAM = compliance-assurance monitoring	LAER = lowest achievable emission rate
CEMS = continuous emissions monitoring systems	lb = pound
cfm = cubic feet (per) minute	lb/day = pound per day
CFR = Code of Federal Regulations	lb/hr = pound per hour
CN = customer ID number	lb/MMBtu = pound per million British thermal units
CNG = compressed natural gas	LDAR = Leak Detection and Repair (Requirements)
CO = carbon monoxide	LNG = liquefied natural gas
COMS = continuous opacity monitoring system	LPG = liquefied petroleum gas
CPMS = continuous parametric monitoring system	LT/D = long ton per day
DFW = Dallas/ Fort Worth (Metroplex)	m = meter
DE = destruction efficiency	m <sup>3</sup> = cubic meter
DRE = destruction and removal efficiency	m/sec = meters per second
dscf = dry standard cubic foot or feet	MACT = maximum achievable control technology
dscfm = dry standard cubic foot or feet per minute	MAERT = Maximum Allowable Emission Rate Table
ED = (TCEQ) Executive Director	MERA = Modeling and Effects Review Applicability
EF = emissions factor	mg = milligram
EFR = external floating roof tank	mg/g = milligram per gram
EGU = electric generating unit	mL = milliliter
EI = Emissions Inventory	MMBtu = million British thermal units
ELP = El Paso	MMBtu/hr = million British thermal units per hour
EPA = (United States) Environmental Protection Agency	MSDS = material safety data sheet
EPN = emission point number	MSS = maintenance, startup, and shutdown
ESL = effects screening level	MW = megawatt
ESP = electrostatic precipitator	NAAQS = National Ambient Air Quality Standards
FCAA = Federal Clean Air Act	NESHAP = National Emission Standards for Hazardous Air Pollutants
FCCU = fluid catalytic cracking unit	NGL = natural gas liquids
FID = flame ionization detector	NNSR = nonattainment new source review
FIN = facility identification number	NO <sub>x</sub> = total oxides of nitrogen
ft = foot or feet	NSPS = New Source Performance Standards
ft/sec = foot or feet per second	
g = gram	
gal/wk = gallon per week	
gal/yr = gallon per year	
GLC = ground level concentration	

PAL = plant-wide applicability limit  
PBR = Permit(s) by Rule  
PCP = pollution control project  
PEMS = predictive emission monitoring system  
PID = photo ionization detector  
PM = periodic monitoring  
PM = total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented  
PM<sub>2.5</sub> = particulate matter equal to or less than 2.5 microns in diameter  
PM<sub>10</sub> = total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented  
POC = products of combustion  
ppb = parts per billion  
ppm = parts per million  
ppmv = parts per million (by) volume  
psia = pounds (per) square inch, absolute  
psig = pounds (per) square inch, gage  
PTE = potential to emit  
RA = relative accuracy  
RATA = relative accuracy test audit  
RM = reference method  
RVP = Reid vapor pressure  
scf = standard cubic foot or feet  
scfm = standard cubic foot or feet (per) minute  
SCR = selective catalytic reduction  
SIL = significant impact levels  
SNCR = selective non-catalytic reduction  
SO<sub>2</sub> = sulfur dioxide  
SOCMI = synthetic organic chemical manufacturing industry  
SRU = sulfur recovery unit  
TAC = Texas Administrative Code  
TCAA = Texas Clean Air Act  
TCEQ = Texas Commission on Environmental Quality  
TD = Toxicology Division  
TLV = threshold limit value  
TMDL = total maximum daily load  
tpd = tons per day  
tpy = tons per year  
TVP = true vapor pressure  
VOC = volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
VRU = vapor recovery unit or system

## Special Conditions

Permit Numbers 19199 and PSDTX1238

### Emissions Standards

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other conditions specified in this permit. **(12/05)**

### Federal Applicability

2. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated for the following:
  - A. Small Industrial-Commercial-Institutional Steam Generating Units in Title 40 Code of Federal Regulations (40 CFR) Part 60, Subparts A and Dc.
  - B. Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 in 40 CFR Part 60, Subparts A and Kb.
  - C. Equipment Leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemical Manufacturing Industry (SOCMI) in 40 CFR Part 60, Subparts A and VV.
  - D. The VOC Emissions from SOCMI Distillation Operations in 40 CFR Part 60, Subparts A and NNN.
  - E. The VOC Emissions from SOCMI Reactor Processes in 40 CFR Part 60, Subparts A and RRR. **(12/05)**
3. These facilities shall comply with all applicable requirements of EPA regulations on National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Source Categories promulgated for the following:
  - A. SOCMI in 40 CFR Part 63, Subparts A and F.
  - B. SOCMI Process Vents, Storage Vessels, Transfer Operations, and Wastewater in 40 CFR Part 63, Subparts A and G.
  - C. Equipment Leaks in 40 CFR Part 63, Subparts A and H. **(12/05)**

### Emission Controls

4. 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 emission rates table. 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, with the exception of those listed below. **(12/05)**

Equipment No.	Description	Tag No.
DR-101A	Ethylene Dichloride (EDC) Reactor A	RV-101A RV-102A RV-102C
DR-101B	EDC Reactor B	RV-101B RV-102B RV-102D
DR-101C	EDC Reactor C	RV-101C RV-102E RV-102F
DC-102	Light Ends Distillation Column	RV-105 RV-106
DC-103	Heavy Ends Distillation Column	RV-107 RV-108
DC-104	EDC Recovery Column	RV-110
DV-301	Wet Waste Gas Buffer Tank	RV-301
DV-302	Dry Waste Gas Buffer Tank	RV-302
DC-105	HC1 Stripper Column	RV-111

5. The Incinerator-Scrubber System identified as Emission Point No. (EPN) 6002A/B/C shall achieve a destruction efficiency of the carbon compounds, excluding carbon dioxide, of no less than 99.95 percent, on a rolling 60-minute average. The Incinerator-Scrubber System shall maintain the hydrogen chloride (HCl) and chlorine (Cl<sub>2</sub>) concentrations in the system exhaust so that they do not exceed 7.4 and 7.5 parts per million by volume (ppmv) (ppmv, dry conditions, no excess air, on a rolling 60-minute average), respectively. **(12/05)**
6. The Incinerator-Scrubber System firebox exit temperature shall be maintained at not less than 1600°F and the incinerator combustion chamber oxygen (O<sub>2</sub>) concentration not less than 3 percent while waste gas is being fed into the system. **(04/07)**
7. The Incinerator-Scrubber System firebox exit 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 six 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 Fahrenheit or ±4.5°F. **(04/07)**

Quality assured (or valid) data must be generated when the Incinerator-Scrubber System is operating, except during the performance of an accuracy check, which will be performed at intervals of not more than six months. 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 Incinerator-Scrubber System operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. **(12/05)**

8. The O<sub>2</sub> analyzer used to satisfy Special Condition No. 6 shall continuously monitor and record O<sub>2</sub> concentration when waste gas is directed to the oxidizer. It shall reduce the O<sub>2</sub> readings to an averaging period of 6 minutes or less and record it at that frequency. **(04/07)**

The O<sub>2</sub> analyzer shall be installed, calibrated, and maintained according to accepted industry practice and the manufacturer's specifications. The analyzer shall be calibrated at the intervals recommended by the manufacturer, but the interval between calibrations shall never exceed one

month. Copy of the accepted industry practice and the manufacturer's specifications shall be maintained on site and made available to Texas Commission on Environmental Quality (TCEQ) representatives upon request.

Quality-assured (or valid) data must be generated when the Incinerator-Scrubber System is operating, except during the performance of a monthly calibration 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 Incinerator-Scrubber System operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. **(12/05)**

9. The exit temperature of the stand-by oxidizer firebox shall be maintained at not less than 800°F on a rolling 60-minute average. **(12/05)**
10. The permit holder shall install and maintain an absorber in each of the incinerator-scrubber systems venting through the Stack identified as EPN 6002A/B/C. The absorbers A, B, and C shall be subject to the following conditions: **(04/07)**
  - A. The minimum water circulation rate shall be greater than 70 gallons per minute (gpm) for absorbers A and B, and greater than 345 gpm for absorber C. The circulation rate shall be monitored and recorded at least once a day. **(04/07)**
  - B. The maximum absorber exhaust gas temperature shall not exceed 200°F. The holder of this permit shall install and maintain a temperature monitor for the absorber exhaust. The temperature shall be recorded at least every day. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of the reading or 4.5 degrees Fahrenheit. **(04/07)**
  - C. The HCl concentration in the liquid purge shall not exceed 15 percent.
  - D. Records of the water circulation rate, temperature of the gas exiting the absorber and the HCl concentration in the liquid purge shall be made available to the TCEQ Executive Director or his representative upon request.
  - E. Quality-assured (or valid) data must be generated when waste gas is being directed to the oxidizer. 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 Incinerator-Scrubber System operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.
11. The permit holder shall install and maintain a caustic scrubber in each of the incinerator-scrubber systems venting through the stack identified as EPN 6002A/B/C. The caustic scrubbers A, B, and C shall be subject to the following conditions: **(04/07)**
  - A. The scrubbing solution shall be maintained at or above a pH of 9.0. The pH shall be analyzed and recorded at least once a day. **(04/07)**
  - B. The caustic scrubber circulation rate shall be a minimum of 40 gpm for scrubbers A and B, and a minimum of 220 gpm for absorber C. The circulation rate shall be monitored and recorded at least once a day. **(04/07)**

- C. Records of pH measurements, circulation rate measurements, and all batch purging operations shall be made available to the TCEQ Executive Director or his representative upon request.
  - D. Quality-assured (or valid) data must be generated when waste gas is being directed to the oxidizer. 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 Incinerator-Scrubber System operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. **(12/05)**
12. The Incinerator-Scrubber System identified as Emission Point No. (EPN) 6002A/B/C shall not have a bypass. **(04/07)**
13. The following requirements apply to capture systems for each incinerator/scrubber system designated as EPN 6002A/B/C. **(02/11)**
- A. If used to control pollutants other than particulate, either:
    - (1) Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or
    - (2) Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.
  - B. The control device shall not have a bypass.  
or  
If there is a bypass for the control device, 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.  
  
A deviation shall be reported if the monitoring or inspections indicate bypass of the control device.
  - C. If any of the above inspections are not satisfactory, the permit holder shall promptly take necessary corrective action.
14. The process control for the vessels listed here shall be designed to interlock feed and steam, if steam is used, so that the vessel internal pressure never exceeds 70 percent of vessel design pressure. The vessels subject to this requirement are: DR-101A, DR 101B, DR-101C, DC 102, DC-103, DC-104, and DC-105. **(12/05)**
15. Relief valves which might vent directly to the atmosphere shall be designed to relieve at no less than three times the normal operating pressure of the vessel on which they are installed. **(12/05)**

16. The cooling towers (EPNs EDC-CT, 2C-C1, and 2C-C2,) shall be operated and monitored in accordance with the following: **(01/25)**
- A. The cooling tower water shall be monitored monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.
  - B. Cooling tower water VOC concentrations above 0.01 parts per million by weight (ppmw) indicate faulty equipment. Equipment shall be maintained so as to minimize VOC emissions into the cooling water. Faulty equipment shall be repaired at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs.
  - C. Emissions from the cooling tower are not authorized if the VOC concentration of the water returning to the cooling tower exceeds 0.5 ppmw. The VOC concentrations 0.5 ppmw are not subject to extensions for delay of repair under this permit condition. The results of the monitoring and maintenance efforts shall be recorded.
  - D. Each cooling tower shall be equipped with drift eliminators having manufacturer's design assurance of 0.001% drift or less, with the exception of cooling tower EPN EDC-CT which has a drift of 0.003% or less. Drift eliminators shall be maintained and inspected at least annually. The permit holder shall maintain records of all inspections and repairs.
  - E. Total dissolved solids (TDS) shall not exceed 6,500 ppmw on an hourly basis and 4,150 ppmw on a rolling 12-month. Dissolved solids in the cooling water drift are considered to be emitted as PM, PM<sub>10</sub>, and PM<sub>2.5</sub> as represented in the permit application calculations.
  - F. Cooling towers shall be analyzed for particulate emissions using one of the following methods:
    - (1) Cooling water shall be sampled at least once per day for total dissolved solids (TDS); or
    - (2) TDS sampling may be reduced to weekly if conductivity is monitored daily and TDS is calculated using a ratio of TDS-to-conductivity (in ppmw per  $\mu\text{mho/cm}$  or ppmw/siemens). The ratio of TDS-to-conductivity shall be determined by concurrently monitoring TDS and conductivity on a weekly basis. The permit holder may use the average of two consecutive TDS-to-conductivity ratios to calculate daily TDS; or
    - (3) TDS sampling may be reduced to quarterly if conductivity is monitored daily and TDS is calculated using a correlation factor established for each cooling tower. The correlation factor shall be the average of four consecutive weekly TDS-to-conductivity ratios determined using the paragraph above provided the highest ratio is not more than 10% larger than the smallest ratio.
    - (4) The permit holder shall validate the TDS-to-conductivity correlation factor once semi-annually. If the ratio of concurrently sampled TDS and conductivity is more than 10% higher or lower than the established factor, the permit holder shall increase TDS monitoring to weekly until a new correlation factor can be established.
  - G. Cooling water sampling shall be representative of the cooling water returned to the tower and shall be conducted using approved methods.
    - (1) The analysis method for TDS shall be EPA Method 160.1, ASTM D5907, or SM 2540 C [SM - 19th edition of Standard Methods for Examination of Water]. Water samples should be capped upon collection, and transferred to a laboratory area for analysis.

- (2) The analysis method for conductivity shall be either ASTM D1125-95A (or more recent revision) field or routine laboratory testing or ASTM D1125-95B (or more recent revision) for a continuous monitor. The analysis may be conducted at the sample site or with a calibrated process conductivity meter. If a conductivity meter is used, it shall be calibrated at least annually. Documentation of the method and any associated calibration records shall be maintained.
  - (3) Alternate sampling and analysis methods may be used to comply with the analysis methods outlined in this condition with written approval from the TCEQ Regional Director. Alternate method compliant with Standard Method 2510B is approved by TCEQ for alternative to conductivity analysis methods listed in this condition.
  - (4) Records of all instrument calibrations and test results and process measurements used for the emission calculations shall be retained.
- H. The emission rates of PM, PM<sub>10</sub> and PM<sub>2.5</sub> shall be calculated using the measured TDS and the ratio or correlation of TDS to conductivity measurements, the design drift rate and the daily maximum and average actual cooling water circulation rates. Alternately, the design maximum circulation rate may be used for all calculations. Emission records shall be updated monthly. Total dissolved solids in the cooling water drift are considered to be emitted as PM, PM<sub>10</sub>, and PM<sub>2.5</sub> as represented in the permit application calculations.
- I. Quality assured (or valid) data must be generated when the cooling tower is operating. Loss of valid data due to periods of monitor breakdown, 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 hours) that the cooling tower operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

### **Fugitive Emission Monitoring**

#### **17. Piping, Valves, Connectors, Pumps, Agitators, and Compressors – 28VHP (06/20)**

The following requirements apply to piping, valves, connectors, pumps, agitators, and compressors containing or in contact with fluids that could reasonably be expected to contain greater than or equal to 10 weight percent volatile organic compounds (VOC) at any time.

- A. The requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (psia) at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

- piping and instrumentation diagram (PID);
- a written or electronic database or electronic file;
- color coding;
- a form of weatherproof identification; or
- designation of exempted process unit boundaries.

- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in Paragraph A above. If an unsafe to monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

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

- (1) a cap, blind flange, plug, or second valve must be installed on the line or valve;  
or
  - (2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once within the 72-hour period following the creation of the open-ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.
- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. If a relief valve is equipped with rupture disc, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity.

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

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

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

- G. Except as may be provided for in the special conditions of this permit, all pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.
- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump, compressor, and agitator seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days and a record of the attempt shall be maintained.
- I. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging within 15 days of the detection of the leak. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is

equal to or exceeds the total emissions from a unit shut down as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I) or 500 pounds, whichever is greater, the TCEQ Regional Manager and any local programs shall be notified and the TCEQ Executive Director may require early unit shut down or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

- J. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.
- K. Alternative monitoring frequency schedules of 30 TAC 115.352 - 115.359 or National Emission Standards for Organic Hazardous Air Pollutants, 40 CFR Part 63, Subpart H, may be used in lieu of Items F and G of this condition.
- L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS) and does not constitute approval of alternative standards for these regulations.
- M. Requirements in paragraphs B–E pertaining to new and reworked connections are meant to apply to major significant changes in piping. Insignificant activities exempt from requirements B–E pertaining to new and reworked connections include, but are not limited to: installation/replacement of small number of valves and flanges; minor repairs; gasket replacement; and repair/replacement of small sections of piping. Additionally, the requirement for new and reworked buried connectors to be welded does not apply if compliance would require a process unit shutdown or would create a safety issue including, but not limited to, close proximity of other process pipelines and equipment or unsafe access to the piping.

This paragraph M shall not be construed to authorize the replacement or modification of any component in compliance with requirements of paragraphs B–E with a component which is not in compliance with paragraphs B–E.

- 18. A leak definition of 250 ppmv shall be used in lieu of the VOC concentration shown in SC 17 subparagraph E.(2), and H. This leak definition also applies to connectors monitored according to SC 19. **(07/19)**
- 19. Connectors in VOC Service in the Route 200 Area — 28CNTQ

Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment: **(12/05)**

- A. In addition to the weekly physical inspection required by Item E of Special Condition No. 17, all accessible connectors in gas/vapor and light liquid service shall be monitored quarterly with an approved gas analyzer in accordance with Items F thru J of Special Condition No. 17.
- B. In lieu of the monitoring frequency specified in Paragraph A, connectors may be monitored on a semiannual basis if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

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

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

- C. The percent of connectors leaking used in paragraph B shall be determined using the following formula:

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

Where:

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

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

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

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

20. Piping, Valves, Pumps, and Compressors in Cl<sub>2</sub> Service

- A. Audio, olfactory, and visual checks for Cl<sub>2</sub> leaks within the operating area shall be made every week.
- B. Immediately (but not later than one hour) upon detection of a leak, plant personnel shall take at least one of the following actions:
- (1) Isolate the leak by removing process fluid from the leaking component or equipment.
  - (2) Commence repair or replacement of the leaking component.
  - (3) If immediate repair is not possible, use a leak collection/containment system to prevent the leak until repair or replacement can be made.
- C. Records shall be maintained at the plant site of all repairs and replacements made. They shall include date and time of leak checks, results, date, and time repairs are commenced, and date and time repairs are completed.

**Stack Testing**

21. Sampling ports and platforms shall be incorporated into the design of the incinerator-scrubber stack according to the specifications set forth in Chapter 2, "Stack Sampling Facilities" of the TCEQ Sampling Procedures Manual. Alternate sampling facility designs may be submitted for approval to the TCEQ Regional Director or the TCEQ Compliance Support Division. **(12/05)**
22. Upon request of the TCEQ Executive Director, the holder of this permit shall perform stack sampling and other testing as required to establish the destruction efficiency and actual pattern and quantities of air pollutants being emitted into the atmosphere from each Incinerator-Scrubber Train (EPNs 6002A, 6002B, and 6002C). The holder of this permit is responsible for providing sampling

and testing facilities and conducting the sampling and testing operations at their expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Reference Methods. **(12/05)**

New stack testing shall be conducted in accordance with this permit condition as represented in the permit alteration representations dated March 8, 1999.

- A. The appropriate TCEQ Regional Office in the region where the source is located shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

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.
- (6) Procedure/parameters to be used to determine worst-case emissions during the sampling period.

The purpose of the pretest meeting is to review and formalize 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 TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

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

- B. Air contaminants emitted from the incinerator/scrubbers to be tested for include (but are not limited to) VOC, ethylene dichloride (EDC), Cl<sub>2</sub>, HCl, nitrogen oxides, and carbon monoxide.
- C. Sampling shall occur within 60 days after initial operation of the incinerator scrubber train and at such times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office. Initial sampling has been completed for the Incinerator-Scrubber Trains identified as EPNs 6002A, 6002B, and 6002C. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 61 requires prior approval, and requests shall be submitted to the TCEQ Regional Office.
- D. The plant shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of production rate shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. If the plant is unable to operate at maximum rates during testing, then future production rates may be limited to the rates established during testing. Additional stack testing may be required when higher production rates are achieved.

- E. Three 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: **(12/05)**

One copy to the TCEQ Corpus Christi Regional Office.

One copy to the EPA, Air Enforcement Branch, Region 6, Dallas.

- F. Sampling shall be performed at least every five years in accordance with A, B, and D of this condition.

- 23. Reserved. **(06/20)**

**Maintenance Practices**

- 24. The concentration of EDC in the equipment vapor space shall be no more than 5 percent of the equipment volume at standard temperature and pressure prior to opening any equipment directly to atmosphere. This condition shall apply to all equipment containing at least 10 percent EDC by weight. Any emissions associated with these activities are not authorized and are subject to Title 30 Texas Administrative Code (30 TAC) § 101.211, Subchapter F. **(03/07)**

**Recordkeeping**

- 25. A copy of the most recent test report, which contains the results of the testing conducted in accordance with Special Condition No. 22, shall be maintained on-site with a copy of the permit. **(06/99)**

**Contemporaneous Reductions**

- 26. Approval of the permit amendment application, form PI-1 dated January 25, 2005, is conditioned on completion of all emission reduction projects represented on the plot plan of the permit amendment application. The holder of this permit shall implement quarterly monitoring on connectors within the area identified as "Route 200" associated with the Water Wash and Caustic Wash Systems.

These reductions in emissions shall occur not later than the commencement of operation of the modified facilities. The holder of this permit shall maintain records of these emission reductions and provide access and/or copies upon request to the TCEQ Executive Director, his representatives, or any local air pollution control program having jurisdiction. **(12/05)**

**Maintenance, Start-Up, and Shutdown Emissions (MSS)**

- 27. This permit authorizes air emissions from the planned maintenance, startup, and shutdown (MSS) activities identified in the following table performed at the facilities authorized by this permit.

Facilities	Description/ Emissions Activity	EPN
All facilities*	Depressurize and purge to control per Special Condition 29	6002 A/B/C

Facilities	Description/ Emissions Activity	EPN
All facilities*	Degas facilities to atmosphere after control per Special Condition 29	EDC-MAINT
All facilities*	Fill and/or vent to control during startup	6002 A/B/C
Incinerator-Scrubber	Startup	6002 A/B/C
Instruments/analyzers	Maintenance and calibrations	EDC-MAINT
All facilities	Sampling and sight glass cleaning	EDC-MAINT

\* - all facilities include piping

In addition, planned MSS emissions emitted from routine emission points are authorized provided the emissions are compliant with the respective MAERT allowable emission rates and special conditions. This permit authorizes emissions from the following temporary facilities used to support planned MSS activities at permanent site facilities: vacuum trucks and control devices meeting the requirements of Special Condition 33 and 35. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned MSS activities at the permanent facilities authorized by this permit, and (c) does not operate as a replacement for an existing authorized facility. **(11/12)**

28. This permit authorizes the emissions from the facilities identified in Special Condition 27 for the planned MSS activities summarized in the MSS Activity Summaries (Attachments A, B and C) attached to this permit.

Attachment A identifies the inherently low emitting MSS activities that may be performed at the site. Emissions from activities identified in Attachment A shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from the activities listed in Attachment A must be revalidated annually. This revalidation shall consist of the estimated emissions for each type of activity and the basis for that emission estimate.

Routine maintenance activities, as identified in Attachment B may be tracked through the work orders or equivalent. Emissions from activities identified in Attachment B shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

The performance of each planned MSS activity identified in Attachment C and the emissions associated with it shall be recorded and include at least the following information:

- A. The process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;
- B. The type of planned MSS activity and the reason for the planned activity;
- C. The common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;

- D. The date and time of the MSS activity and its duration;
- E. The estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, PI-1 dated January 3, 2008, and consistent with good engineering practice.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis. **(11/12)**

29. Except for storage tanks, instrumentation/analyzer maintenance and vacuum trucks, process units and facilities shall be depressurized, degassed, and placed back into service in accordance with the following requirements.

- A. The process equipment shall be vented to a control device or a controlled recovery system during depressurization.
- B. All liquids from process equipment or storage vessels must be removed to the maximum extent practical prior to opening equipment or commencing depressurization, degassing and/or maintenance. Equipment that only contains material with VOC partial pressure less than 0.50 psi at the normal process temperature and 95°F may be opened to the atmosphere after liquids are removed as required by this condition. Liquids must be drained into a closed vessel unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour of being drained.
- C. If mixed phase materials must be removed from process equipment during depressurization, liquids removal, or degassing, the cleared material shall be routed to a knockout drum or equivalent to allow for managed initial phase separation. Any vents in the knockout drum or equivalent must be routed to a control device or a controlled recovery system. Control must remain in place while mixed phase material removal is being performed.
- D. Facilities shall be degassed using practices that ensure air contaminants are removed from the system through the control device or controlled recovery system to the extent allowed by process equipment or storage vessel design. Records shall be maintained of the control device or recovery system utilized with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.
- E. After degassing in accordance with Special Condition 29.D, the VOC concentration in the facilities being degassed shall be verified to be below 10,000 ppmv or less than 10 percent of the lower explosive limit (LEL) using one of the methods below prior to opening directly to atmosphere.
  - (1) For MSS activities other than process unit startup, shutdown, or turnaround, the following option may be used in lieu of (2) below. The facilities being prepared for maintenance shall not be vented directly to atmosphere, except as necessary to verify an acceptable VOC concentration and establish isolation of the work area, until the VOC concentration has been verified to be less than 10 percent of the lower explosive limit (LEL) per the site safety procedures.
  - (2) Documentation shall be maintained of the locations and/or identifiers where the purge gas or steam enters the process equipment or storage vessel and the exit points for the purge gases. If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system

before the vent stream may be sampled to verify acceptable VOC concentration prior to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition 30. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 10,000 ppmv or less than 10 percent of the lower explosive limit (LEL). Documented plant procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures) that achieve at least the same level of purging may be used in lieu of the above.

- F. Gases and vapors with VOC partial pressure greater than 0.50 psi may be vented directly to atmosphere if all the following criteria are met:
- (1) It is not technically practicable to depressurize or degas, as applicable, into the process.
  - (2) There is not an available connection to a plant control system (flare or incinerator).
  - (3) There is no more than 50 lb of air contaminant to be vented to atmosphere during shutdown or startup, as applicable.
  - (4) Emissions of ethylene dichloride must be included in the records required by this condition.

Except as noted in Attachment A, all instances of venting directly to atmosphere per Special Condition 29.F must be documented when occurring as part of any MSS activity. The emissions associated with venting without control must be included in the activity record for those planned MSS activities. **(11/12)**

30. Air contaminant concentration shall be measured using an instrument/detector meeting one of the following methods:
- A. VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR 60, Appendix A) with the following exceptions:
- (1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate response factor shall be recorded.
  - (2) Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes, recording VOC concentration each minute. The highest measured VOC concentration shall not exceed the specified VOC concentration limit prior to uncontrolled venting.
- B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.
- (1) The air contaminant concentration measured must be less than 80 percent of the range of the tube. If the maximum range of the tube is greater than the release concentration

defined in (3) the concentration measured must be at least 20 percent of the maximum range of the tube.

- (2) The tube is used in accordance with the manufacturer's guidelines.
- (3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

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

The mole fraction of the total air contaminants present in the gas stream that can be detected by the tube may be estimated based on process knowledge. The release concentration and basis for its determination shall be recorded.

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

C. Lower explosive limit measured with a lower explosive limit detector. **(05/13)**

- (1) The detector shall be calibrated monthly with a certified propane gas standard at 50% of the lower explosive limit (LEL) for propane. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.
- (2) A daily functionality test shall be performed on each detector using the same certified gas standard used for calibration. The LEL monitor shall read no lower than 90% of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.
- (3) A certified methane gas standard equivalent to 50% of the LEL for propane may be used for calibration and functionality tests provided that the LEL response is within 95% of that for propane.

D. As an alternative to an instrument/detector, the analysis may be conducted in a laboratory. Bag samples of the gas discharged may be drawn and taken to a Formosa laboratory to be analyzed by gas chromatography (GC). A minimum of two bag samples shall be drawn approximately ten minutes apart. A Tedlar bag, or a bag appropriate for the material to be sampled, shall be used and shall have a valve to seal gas in the bag. The samples shall be drawn as follows:

- (1) The sample point on the equipment being cleared shall be purged sufficiently to ensure a representative sample at the sample valve.
- (2) The sample bag shall be connected directly to the sample valve.
- (3) The sample valve and sample bag shall be opened to allow the bag to fill to approximately 80% of capacity. The sample connections shall be fitted such that no air is drawn into the sample bag.
- (4) The two valves shall then be closed to seal the sample in the bag.
- (5) The sample bag shall then be disconnected and placed in a dark container out of direct sunlight for transport to the analyzer.
- (6) This process is repeated to collect additional samples.

- (7) The sample shall be analyzed within 12 hours of collection.

The laboratory GC shall meet or exceed the requirements of 40 CFR 60, Appendix A, Method 18 Sections 6 (Equipment and Supplies), 7 (Reagents and Standards), 9 (Quality Control), and 10 (Calibration and Standards). An alternative laboratory method may be approved by the TCEQ Regional Office upon request. The sample shall be analyzed per Section 8.2.1.5 of Method 18, except the analysis does not need to be performed in triplicate. The highest measured VOC concentration shall not exceed the specified VOC concentration limit prior to uncontrolled venting. **(11/12)**

31. Reserved **(06/20)**

32. This permit authorizes emissions from fixed roof storage tanks. The following requirements apply.

- A. If the VOC partial pressure of the liquid previously stored in the tank is greater than 0.50 psi at 95°F, controlled degassing shall be completed as follows:
- (1) Any gas or vapor removed must be routed to a control device or a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. The locations and identifiers of vents other than permanent roof fittings and seals, control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the storage tank when degassing to the control device or controlled recovery system.
  - (2) The vapor space shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the control device or controlled recovery system to the extent allowed by the storage tank design.
  - (3) A volume of purge gas equivalent to twice the volume of the vapor space must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition 30.
  - (4) The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged.
  - (5) Degassing must be performed every 24 hours unless there is no standing liquid in the tank or the VOC partial pressure of the remaining liquid in the tank is less than 0.15 psia.
- B. The tank shall not be opened or ventilated without control, except as allowed by (1) or (2) below until one of the criteria in part C of this condition is satisfied.
- (1) Minimize air circulation in the tank vapor space.
    - (a) One manway may be opened to allow access to the tank to remove or de-volatilize the remaining liquid. Other manways or access points may be opened as necessary to remove or de-volatilize the remaining liquid. Wind barriers shall be installed at all open manways and access points to minimize air flow through the tank.

- (b) Access points shall be closed when not in use.
- (2) Minimize time and VOC partial pressure.
  - (a) The VOC partial pressure of the liquid remaining in the tank shall not exceed 0.044 psi as documented by the method specified in part C.(1) of this condition;
  - (b) Blowers may be used to move air through the tank without emission control at a rate not to exceed 2800 cubic feet per minute for no more than 432 hours. All standing liquid shall be removed from the tank during this period.
  - (c) Records shall be maintained of the blower circulation rate, the duration of uncontrolled ventilation, and the date and time all standing liquid was removed from the tank.
- C. The tank may be opened without restriction and ventilated without control, after all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure less than 0.02 psia. These criteria shall be demonstrated in any one of the following ways.
  - (1) Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure of the liquid mixture remaining in the tank to less than 0.02 psia. This liquid shall be added during tank degassing if practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC partial pressure may be estimated based on this information and engineering calculations.
  - (2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:
    - (a) Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR 435 Subpart A Appendix 1.
    - (b) Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).
    - (c) Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv through the procedure in Special Condition 30.
  - (3) No standing liquid verified through visual inspection.

The permit holder shall maintain records to document the method used to release the tank.
- D. The occurrence of each degassing and the associated emissions shall be recorded and the rolling 12-month tank emissions shall be updated on a monthly basis. These records shall include at least the following information:
  - (1) the identification of the tank and emission point number, and any control devices or recovery systems used to reduce emissions;
  - (2) the reason for the tank maintenance;
  - (3) for the purpose of estimating emissions, the date, time, and other information specified for each of the following events:
    - (a) all liquid was pumped from the tank to the extent practical,

- (b) start and completion of controlled degassing, and total volumetric flow,
    - (c) all standing liquid was removed from the tank or any transfers of low VOC partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to <0.02 psi,
    - (d) if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow,
  - (4) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events b and d with the data and methods used to determine it. The emissions associated with fixed roof storage tank activities shall be calculated using the methods described in the permit application. **(11/12)**
33. The following requirements apply to vacuum and air mover truck operations to support planned MSS at this site:
- A. Vacuum pumps and blowers shall not be operated on trucks containing or vacuuming liquids with VOC partial pressure greater than 0.50 psi at 95°F unless the vacuum/blower exhaust is routed to a control device or a controlled recovery system.
  - B. Equip fill line intake with a “duckbill” or equivalent attachment if the hose end cannot be submerged in the liquid being collected.
  - C. A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.
    - (1) Prior to initial use, identify any liquid in the truck and the truck identifier (bill of lading or other unique identifier). Record the liquid level and document that the VOC partial pressure is less than 0.50 psi if the vacuum exhaust is not routed to a control device or a controlled recovery system. After each liquid transfer, identify the liquid transferred and document that the VOC partial pressure is less than 0.50 psi if the vacuum exhaust is not routed to a control device or a controlled recovery system.
    - (2) For each liquid transfer made with the vacuum operating, record the duration of any periods when air may have been entrained with the liquid transfer. The reason for operating in this manner and whether a “duckbill” or equivalent was used shall be recorded. Short, incidental periods, such as those necessary to walk from the truck to the fill line intake, do not need to be documented.
    - (3) If the vacuum truck pump exhaust is controlled with a control device other than an engine or oxidizer, records shall be maintained of VOC exhaust concentration upon commencing each transfer, at the end of each transfer, and at least every hour during each transfer, measured using an instrument meeting the requirements of Special Condition 30.
    - (4) The volume in the vacuum truck at the end of the day, or the volume unloaded, as applicable.
  - D. The permit holder shall determine the vacuum truck emissions each month using the daily vacuum truck records and the calculation methods utilized in the permit application. If records of the volume of liquid transferred for each pick-up are not maintained, the emissions shall be determined using the physical properties of the liquid vacuumed with the greatest potential emissions. Rolling 12 month vacuum truck emissions shall also be determined on a monthly basis. **(11/12)**

34. MSS activities represented in the permit application may be authorized under permit by rule only if the procedures, emission controls, monitoring, and recordkeeping are the same as those required by this permit. **(11/12)**
35. Control devices required by this permit for emissions from planned MSS activities are limited to those types identified in this condition. Control devices shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Each device used must meet all the requirements identified for that type of control device.

Controlled recovery systems identified in this permit shall be directed to an operating process or to a collection system that is vented through a control device meeting the requirements of this permit condition.

A. Carbon Adsorption System (CAS).

- (1) The CAS shall consist of two carbon canisters in series with adequate carbon supply for the emission control operation.
- (2) The CAS shall be sampled downstream of the first can and the concentration recorded at least once every hour of CAS run time to determine breakthrough of the VOC. The sampling frequency may be extended using either of the following methods:
  - (a) It may be extended to up to 30 percent of the minimum potential saturation time for a new can of carbon. The permit holder shall maintain records including the calculations performed to determine the minimum saturation time.
  - (b) The carbon sampling frequency may be extended to longer periods based on previous experience with carbon control of a MSS waste gas stream. The past experience must be with the same VOC, type of facility, and MSS activity. The basis for the sampling frequency shall be recorded. If the VOC concentration on the initial sample downstream of the first carbon canister following a new polishing canister being put in place is greater than 100 ppmv above background, it shall be assumed that breakthrough occurred while that canister functioned as the final polishing canister and a permit deviation shall be recorded.
- (3) The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 30.
- (4) Breakthrough is defined as the highest measured VOC concentration at or exceeding 100 ppmv above background. When the condition of breakthrough of VOC from the initial saturation canister occurs, the waste gas flow shall be switched to the second canister and a fresh canister shall be placed as the new final polishing canister within four hours. Sufficient new activated carbon canisters shall be maintained at the site to replace spent carbon canisters such that replacements can be done in the above specified time frame.
- (5) Records of CAS monitoring shall include the following:
  - (a) Sample time and date.
  - (b) Monitoring results (ppmv).
  - (c) Canister replacement log.

- (6) Single canister systems are allowed if the time the carbon canister is in service is limited to no more than 30 percent of the minimum potential saturation time. The permit holder shall maintain records for these systems, including the calculations performed to determine the saturation time. The time limit on carbon canister service shall be recorded and the expiration date attached to the carbon can.
  - B. The plant Incinerator-Scrubber System (EPN 6002 A/B/C) shall operate as specified in Special Conditions 5 through 13.
  - C. A liquid scrubbing system may be used upstream of carbon adsorption. A single carbon can or a liquid scrubbing system may be used as the sole control device if the requirements below are satisfied.
    - (1) The exhaust to atmosphere shall be monitored continuously and the VOC concentration recorded at least once every 15 minutes when waste gas is directed to the scrubber.
    - (2) The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 30.
    - (3) An alarm shall be installed such that an operator is alerted when outlet VOC concentration exceeds 100 ppmv above background. The MSS activity shall be stopped as soon as possible when the VOC concentration exceeds 100 ppmv above background for more than one minute. The date and time of all alarms and the actions taken shall be recorded. **(11/12)**
36. The following requirements apply to capture systems for the Incinerator-Scrubber System (EPN 6002 A/B/C).
- A. Either 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 verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21 once a year. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.
  - B. The control device shall not have a bypass.
  - C. If any of the above inspections is not satisfactory, the permit holder shall promptly take necessary corrective action. Records shall be maintained documenting the performance and results of the inspections required above. **(11/12)**
37. Reserved **(06/20)**

### **Ambient Monitoring**

38. The holder of this permit, at the permittee's expense, shall continue operation and maintenance of the community ambient air monitoring system as summarized in the table in this condition pursuant to 30 TAC §101.8. A copy of the measured sampling results shall be provided to the TCEQ on a quarterly basis. If a condition of air pollution related to EDC emissions is determined by the TCEQ consistent with the requirements of §382.025 of the Texas Clean Air Act, additional controls may be required. Biannually, FPC TX may petition the Executive Director to discontinue the community ambient air monitoring requirements (as specified in Special Conditions 38 through 48).

The following community ambient air sampling systems will be operated and maintained consistent with applicable guidelines of the quality assurance/quality control procedures as described in EPA's Quality Assurance Handbook for Air Pollution Measurement Systems (EPA-454/B-17-001). **(07/19)**

Monitor Name	Type of Monitor	Location	Monitoring Frequency
PC FTIR	FTIR	Formosa Guesthouse in Point Comfort near intersection of Pease St. and Clark St.	30 minute average data
PC Plant(2)	Summa Canister	Formosa Parking Lot South of Formosa Plant Gate 1 on FM1593	Every Other Day(1)
City Hall	Summa Canister	City Hall at 102 Jones Street	Every Sixth Day(1)
City Park	Summa Canister	On the Northeast side of the City Park on Lamar Street	Every Sixth Day(1)
Formosa Training/Development Center (FTDC)	Summa Canister	FTDC on Lamar Street	Every Sixth Day(1)
North FTIR	FTIR	FM1593 approximately 3 miles North of FM1593/SH35 intersection	30 minute average data
North	Summa Canister	FM1593 approximately 3 miles North of FM1593/SH35 intersection	Once Every Month(1)

- A. The permit holder shall obtain and analyze 24-hour samples collected by the Summa canisters for five compounds: Ethylene Dichloride, Vinyl Chloride, Benzene, 1,3-Butadiene and Ethylene at the monitoring frequency identified above.
  - B. The data collected by the PC Plant Summa canister, which is located inside the FPC TX property, will be used to determine concentrations representative of potential maximum public exposure at the nearest residence.
  - C. The Summa canister systems shall operate with a data return of at least 75%.
39. The permit holder shall operate the Fourier-Transform Infrared (FTIR) monitoring systems consisting of two open path FTIR analyzers continuously. A data collection system shall be installed which does the following: **(07/19)**
- A. Compiles five-minute, rolling 30-minute, 24-hour calendar day, and annual averages for benzene, 1,3-butadiene, vinyl chloride, ethylene dichloride, ethylene, ethylene oxide, and hydrogen chloride;

- B. Graphically displays monitored levels of each reported compound as well as contemporaneous wind speed and wind direction;
  - C. Provides secure internet access to the graphical displays of the FTIR monitoring results to TCEQ staff in Austin and the Corpus Christi Regional Office;
  - D. Determines the operating status of the monitoring system;
  - E. Permanently stores and quantifies all five-minute spectral data, for a period of at least five (5) years; and
  - F. Is capable of retrieving five-minute spectral data for any compound monitored for later evaluation.
  - G. The monitoring system shall operate with a data return of at least 75%.
40. The FTIR monitoring system shall detect off-property concentrations of compounds as listed in the following paragraphs: **(07/19)**
- A. Tier 1: The permit holder shall automatically be notified in the event that any single 5-minute average concentration in Table 1 is exceeded. The permit holder shall monitor the data, determine whether elevated levels are continuing, and respond appropriately to mitigate conditions resulting in the reported levels.

Table 1  
 Tier 1: Preliminary Notification

Compound	FTIR Trigger Level 5-minute average (ppbv)
Benzene	120
1,3-Butadiene	40
Ethylene	500
Ethylene dichloride	100
Ethylene oxide	70
Hydrogen chloride	14
Vinyl chloride	25

- B. Tier 2: In addition to the routine Summa canister monitoring required by Special Condition 39,
  - (1) For the PC FTIR a one-hour event Summa canister sample at the PC Plant shall be automatically activated in the event that any 30-minute rolling average FTIR trigger level listed in Table 2 is exceeded.
  - (2) For the North FTIR, a one-hour event Summa canister sample at the North site shall be automatically activated in the event that any 30-minute rolling average FTIR trigger level listed in Table 2 is exceeded.
  - (3) One (1) one-hour event Summa canister shall be available at each station in a state of readiness for this activation. The event Summa canister shall be retrieved and exchanged with new event Summa canisters within 48 hours of activation.

Table 2  
 Tier 2: Canister Activation

Compound	FTIR Trigger Level Rolling 30-minute average (ppbv)
Benzene	60
1,3-Butadiene	25
Ethylene	500
Ethylene dichloride	50
Vinyl chloride	25

- C. The one-hour event Summa canister located at the PC Plant station shall be capable of being activated by the FTIR per the Tier 2 trigger level above or activated by the permit holder. The four other one-hour event canisters at the remaining stations shall be capable of being activated by the FTIR system computer or by the permit holder. TCEQ Region staff can request that one or more one-hour event canisters be activated by contacting the Shift Safety Coordinator at (361) 987-7000.
- D. All event Summa canisters shall collect 1-hour samples. All samples are to be analyzed, at a minimum, for benzene, vinyl chloride, ethylene, ethylene dichloride, and 1,3-butadiene.
- E. All routine and event Summa canister samples shall be analyzed by a laboratory accredited by the State of Texas under the National Environmental Laboratory Accreditation Program (NELAP). The following requirements shall be met:
- (1) The laboratory shall use Method TO-14 in EPA's Compendium of Methods For The Determination of Toxic Organic Compounds in Ambient Air (EPA-600/4-84-041) or Method TO-15 in EPA's Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (EPA-625/R-96/010b) or any revision or update to these Methods as approved by the US EPA or the TCEQ.
  - (2) The permit holder shall instruct the laboratory to hold all Tier 2 trigger event canisters for at least 10 days after collection to provide the TCEQ the opportunity to re-analyze the samples if it is deemed necessary.
41. The permit holder shall obtain a one-hour event PC SUMMA canister sample when a reportable emissions event occurs at the EDC Plant if the emissions event results in increased emissions of ethylene dichloride and the wind is blowing in the direction of Point Comfort from the EDC plant. The samples shall be analyzed to determine the concentrations of ethylene dichloride. Samples shall be taken as soon as practicable, but not later than 24 hours after the discovery of an emissions event in the EDC Plant. **(07/19)**
42. The permit holder shall notify the TCEQ Regional Air Section Manager within one working day in the event that a rolling 30-minute average concentration measured by the FTIR exceeds the greater of 3-times the respective Tier 1 trigger level or 2-times the respective Tier 2 trigger level. **(07/19)**
43. The permit holder shall provide internet access codes for the TCEQ (for the duration of the monitoring) to remotely access raw or unverified FTIR data. **(07/19)**

44. A meteorological monitoring station shall be collocated with the FTIR monitors. This station shall have a ten-meter tower equipped with instrumentation to measure temperature, wind speed and direction, and relative humidity. **(07/19)**
45. A digital networked video recording system (NVR) will be utilized and operated continuously (with a data return of at least 75%) oriented toward flare 1018. Recordings shall be provided to the TCEQ Corpus Christi Regional Office as requested. Recordings shall be maintained for a period of at least five (5) years. **(07/19)**
46. Written reports summarizing the FTIR data for benzene, 1,3-butadiene, ethylene, ethylene dichloride, ethylene oxide, hydrogen chloride, and vinyl chloride shall be submitted by the permit holder to the regional and central offices of the TCEQ. **(07/19)**
  - A. Data shall be submitted quarterly, with the report due by the end of the subsequent month following the calendar quarter for which the data was collected.
  - B. The report shall include the following:
    - (1) 30-minute block average concentrations with 30-minute block average wind direction data.
    - (2) For each calendar day, 24-hour daily average concentrations with 24-hour average wind directions.
    - (3) Summary of data for compounds that exceeded their Tier 2 rolling 30-minute average trigger levels.
    - (4) Data for event canisters triggered due to an exceedance of the Tier 2 FTIR trigger level.
    - (5) Wind speed/direction roses and chemical-specific polar plots for periods when FTIR Tier 2 trigger levels are exceeded.
    - (6) Additional information may be requested by the TCEQ to evaluate trigger level exceedances.
    - (7) Data from routine Summa canisters for scheduled sampling.
47. All data, computations, and results of the air monitoring program shall be retained for at least 5 years and be made available to the TCEQ and any local air pollution control agencies. **(07/19)**
48. An ambient monitoring system for EDC shall be installed inside the EDC Plant with an alarmed trigger level of 25 ppm. This system shall be operational upon issuance of the alteration (letter dated April 27, 2018). **(07/19)**
49. Permits by Rule (PBR) and Standard Permits (SP) that authorize increases in EDC emissions from the facilities authorized by this permit shall be consolidated by incorporation, such that the authorization is transferred from the PBR or SP into the permit and an impacts analysis is conducted. Consolidation by incorporation shall be done at the next amendment or renewal after the PBR is claimed or the SP is issued. **(07/19)**

Date: January 30, 2025

**Permit 19199 and PSDTX1238**

Attachment A

Inherently Low Emitting Activities

<b>Activity</b>	<b>Emissions</b>
	VOC
Soap and other aqueous based cleaners	X
Maintenance on water treatment systems	X
Replacement of analyzer filters and screens	X
Cleaning sight glasses	X

Date: November 30, 2012

**Permit 19199 and PSDTX1238**

Attachment B

Routine Maintenance Activities

<b>Facilities</b>	<b>Description/Emission Activities</b>	<b>EPN</b>
Reactors	Vent to atmosphere	EDC-MAINT
Columns	Vent to atmosphere	EDC-MAINT
Vessels	Vent to atmosphere	EDC-MAINT
Blowers	Vent to atmosphere	EDC-MAINT
Pumps	Vent to atmosphere	EDC-MAINT
Filter/Strainers	Vent to atmosphere	EDC-MAINT
Heat Exchangers	Vent to atmosphere	EDC-MAINT
Vacuum Trucks	Vent to atmosphere	EDC-MAINT
Maintenance Wastewater	Vent to atmosphere	EDC-MAINT
Scrubbers	Vent to atmosphere	EDC-MAINT
Incinerators	Vent to atmosphere	EDC-MAINT
Piping, Valves and Relief Valves	Vent to atmosphere	EDC-MAINT
Fixed Roof HCl Storage Tanks	Vent to atmosphere	EDC-MAINT

Date: November 30, 2012

**Permit 19199 and PSDTX1238**

Attachment C

Significant MSS Activity Summary

The following activities are subject to the full recordkeeping requirements specified by Special Condition 28.

Plant startup, shutdown, and turnaround

Sludge Cleaning

Fixed Roof VOC Storage Tanks

Activities not listed on Attachments A and B or not otherwise authorized

Date: November 30, 2012

## Emission Sources - Maximum Allowable Emission Rates

Permit Number 19199 and PSDTX1238

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)
EDCFUG	Process Fugitives (5)	Cl <sub>2</sub>	0.01	0.02
		HCl	0.01	0.01
		VOC	2.56	11.22
6002A/B/C	Three Incinerator/ Scrubbers (6)	Cl <sub>2</sub>	0.86	3.78
		CO	2.18	9.54
		CO (7)	9.00	-
		PM	0.35	1.55
		PM <sub>10</sub>	0.35	1.55
		PM <sub>2.5</sub>	0.35	1.55
		HCl	0.44	1.92
		NO <sub>x</sub>	5.69	24.91
		SO <sub>2</sub>	0.02	0.08
		VOC	1.30	5.69
EDC-CT	Cooling Tower T-001	VOC	0.53	1.74
		PM	10.30	21.69
		PM <sub>10</sub>	2.39	7.87
		PM <sub>2.5</sub>	0.01	0.04
		Chlorine compounds	<0.01	0.01
2C-C1	Cooling Tower DT-013	VOC	0.88	3.86
		PM	1.06	3.20
		PM <sub>10</sub>	0.27	1.16
		PM <sub>2.5</sub>	<0.01	<0.01
		Chlorine compounds	<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)
2C-C2	Cooling Tower DT-014	VOC	0.88	3.86
		PM	1.06	3.20
		PM <sub>10</sub>	0.27	1.16
		PM <sub>2.5</sub>	<0.01	<0.01
		Chlorine compounds	<0.01	<0.01
<b>Maintenance, Startup, and Shutdown (MSS)</b>				
EDC-MAINT	Emissions to Atmosphere	VOC	647.96	12.60
		HCl	19.28	2.30
		Cl <sub>2</sub>	0.37	0.01

- (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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- NO<sub>x</sub> - total oxides of nitrogen
- SO<sub>2</sub> - sulfur dioxide
- PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented
- PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented
- PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
- CO - carbon monoxide
- Cl<sub>2</sub> - chlorine
- HCl - hydrogen chloride
- Chlorine Compounds- hypochlorous acid and hydrogen chloride
- (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) This entry represents three separate emissions points. Emissions shown are the maximum allowable rates for the three incinerator/scrubber trains combined.
- (7) Hourly CO emission rate during Startup.

Date: January 30, 2025