

# FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO

Formosa Plastics Corporation, Texas

AUTHORIZING THE OPERATION OF

Formosa Plastics Corporation Texas  
Utilities Plant and Technical and Maintenance Departments  
Plastics Materials

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:   O1951   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 ZZZZ and DDDDD as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.1090 and § 113.1130 respectively, which incorporate the 40 CFR Part 63 Subparts 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. 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. 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)
5. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 61, unless otherwise stated in the applicable subpart:
- A. Title 40 CFR § 61.05 (relating to Prohibited Activities)
  - B. Title 40 CFR § 61.07 (relating to Application for Approval of Construction or Modification)
  - C. Title 40 CFR § 61.09 (relating to Notification of Start-up)
  - D. Title 40 CFR § 61.10 (relating to Source Reporting and Request Waiver)
  - E. Title 40 CFR § 61.12 (relating to Compliance with Standards and Maintenance Requirements)
  - F. Title 40 CFR § 61.13 (relating to Emissions Tests and Waiver of Emission Tests)
  - G. Title 40 CFR § 61.14 (relating to Monitoring Requirements)
  - H. Title 40 CFR § 61.15 (relating to Modification)
  - I. Title 40 CFR § 61.19 (relating to Circumvention)
6. For facilities where total annual benzene quantity from waste is greater than or equal to 10 megagrams per year and subject to emission standards in 40 CFR Part 61, Subpart FF, the permit holder shall comply with the following requirements:
- A. Title 40 CFR § 61.342(c)(1)(i) - (iii) (relating to Standards: General)
  - B. Title 40 CFR § 61.342(f)(1), and (2) (relating to Standards: General)
  - C. Title 40 CFR § 61.342(g) (relating to Standards: General)
  - D. Title 40 CFR § 61.350(a) and (b) (relating to Standards: Delay of Repair)
  - E. Title 40 CFR § 61.355(a)(1)(iii), (a)(2), (a)(6), (b), and (c)(1) - (3) (relating to Test Methods, Procedures, and Compliance Provisions)
  - F. Title 40 CFR § 61.356(a) (relating to Recordkeeping Requirements)

- G. Title 40 CFR § 61.356(b), and (b)(1) (relating to Recordkeeping Requirements)
  - H. Title 40 CFR § 61.356(b)(5) (relating to Recordkeeping Requirements)
  - I. Title 40 CFR § 61.356(c) (relating to Recordkeeping Requirements)
  - J. Title 40 CFR § 61.357(a), (d)(1), (d)(2) (d)(6) and (d)(8) (relating to Reporting Requirements)
7. 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.

### **Additional Monitoring Requirements**

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

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

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

10. 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.
11. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

### **Compliance Requirements**

12. 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.
13. 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**

- 14. 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**

- 15. 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.
  - B. The permit holder shall comply with 40 CFR Part 82, Subpart A for controlling the production, transformation, destruction, export or import of a controlled (ozone-depleting) substance or product as specified in 40 CFR § 82.1 - § 82.13 and the applicable Part 82 Appendices.

- C. The permit holder shall comply with the following 40 CFR Part 82, Subpart E requirements for labeling products using ozone-depleting substances:
- (i) Title 40 CFR § 82.100 (relating to Purpose)
  - (ii) Title 40 CFR § 82.102(a)(1) - (3), (b), (c) (relating to Applicability);
  - (iii) Title 40 CFR § 82.104 (relating to Definitions)
  - (iv) Title 40 CFR § 82.106 - 112 (relating to Warning Statements and Labels)
  - (v) Title 40 CFR § 82.114 (relating to Labeling Containers of Controlled [ozone - depleting] Substances)
  - (vi) Title 40 CFR § 82.116 (relating to Incorporation of Products Manufactured with Controlled [ozone-depleting] Substances)
  - (vii) Title 40 CFR § 82.120 (relating to Petitions)
  - (viii) Title 40 CFR § 82.122 (relating Certification, Recordkeeping, and Notice requirements)
  - (ix) Title 40 CFR § 82.124 (relating to Prohibitions)
- D. The permit holder shall comply with 40 CFR Part 82, Subpart H related to Halon Emissions Reduction requirements as specified in 40 CFR § 82.250 - § 82.270 and the applicable Part 82 Appendices.
- E. The permit holder shall comply with 40 CFR Part 82, Subpart A, § 82.13 related to recordkeeping and reporting requirements for the production and consumption of ozone depleting substances.

### **Permit Location**

16. 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)**

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

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

## **Attachments**

**Applicable Requirements Summary**

**Additional Monitoring Requirements**

**Permit Shield**

**New Source Review Authorization References**

## **Applicable Requirements Summary**

**Unit Summary ..... 14**

**Applicable Requirements Summary ..... 20**

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

## Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
001	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
002	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
003	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
012	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
012	STATIONARY TURBINES	N/A	60GG-2	40 CFR Part 60, Subpart GG	No changing attributes.
7A	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
7A	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
7A	STATIONARY TURBINES	N/A	60GG-1	40 CFR Part 60, Subpart GG	No changing attributes.
7A-HRSG	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60DB-2	40 CFR Part 60, Subpart Db	No changing attributes.
7B	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
7B	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
7B	STATIONARY TURBINES	N/A	60GG-1	40 CFR Part 60, Subpart GG	No changing attributes.
7B-HRSG	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60DB-2	40 CFR Part 60, Subpart Db	No changing attributes.
7C	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
7C	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
7C	STATIONARY TURBINES	N/A	60GG-1	40 CFR Part 60, Subpart GG	No changing attributes.
7C-HRSG	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60DB-2	40 CFR Part 60, Subpart Db	No changing attributes.
7D	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
7D	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
7D	STATIONARY TURBINES	N/A	60GG-1	40 CFR Part 60, Subpart GG	No changing attributes.

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
7D-HRSG	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60DB-3	40 CFR Part 60, Subpart Db	No changing attributes.
7E	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
7E	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
7E	STATIONARY TURBINES	N/A	60GG-1	40 CFR Part 60, Subpart GG	No changing attributes.
7E-HRSG	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60DB-3	40 CFR Part 60, Subpart Db	No changing attributes.
7F	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60DB-1	40 CFR Part 60, Subpart Db	No changing attributes.
7F	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
7G	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
7G	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
7G	STATIONARY TURBINES	N/A	60GG-1	40 CFR Part 60, Subpart GG	No changing attributes.

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
7G-HRSG	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60DB-3	40 CFR Part 60, Subpart Db	No changing attributes.
7H	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60DB-4	40 CFR Part 60, Subpart Db	No changing attributes.
7H	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
7J	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60DB-4	40 CFR Part 60, Subpart Db	No changing attributes.
7J	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
7K	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
7K	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
7K	STATIONARY TURBINES	N/A	60KKKK-1	40 CFR Part 60, Subpart KKKK	No changing attributes.
7K	STATIONARY TURBINES	N/A	63YYYY-1	40 CFR Part 63, Subpart YYYY	No changing attributes.

## Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
7L	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
7L	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
7L	STATIONARY TURBINES	N/A	60KKKK-1	40 CFR Part 60, Subpart KKKK	No changing attributes.
7L	STATIONARY TURBINES	N/A	63YYYY-1	40 CFR Part 63, Subpart YYYY	No changing attributes.
GRPFWP-ACE	SRIC ENGINES	FPM-02A, FPM- 02C, FPM-02E	60III-1	40 CFR Part 60, Subpart III	No changing attributes.
GRPFWP-ACE	SRIC ENGINES	FPM-02A, FPM- 02C, FPM-02E	63ZZZZ-1	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRPFWP-BD	SRIC ENGINES	FPM-02B, FPM- 02D	60III-1	40 CFR Part 60, Subpart III	No changing attributes.
GRPFWP-BD	SRIC ENGINES	FPM-02B, FPM- 02D	63ZZZZ-1	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRPOLDFWP	SRIC ENGINES	UP-F02A, UP- F02B, UP-F02C	63ZZZZ-2	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
TCT01A	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
TCT01B	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
XZ-OS01	STORAGE TANKS/VESSELS	N/A	R5112-1	30 TAC Chapter 115, Storage of VOCs	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)
001	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
002	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
003	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD

## 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)
012	EP	R1111-1	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
012	EU	60GG-2	SO2	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) § 60.334(h)(1) § 60.334(i) § 60.334(i)(2) § 60.334(j) § 60.334(j)(2)(i) § 60.334(j)(2)(iii)	§ 60.334(i) § 60.334(i)(2)	§ 60.334(j) § 60.334(j)(5)
7A	EP	R1111-1	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
7A	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream with a combined weight of the VOC or classes of compounds specified in § 115.121(c)(1)(B)-(C) of 100 lbs (45.4 kg), or less, in a continuous 24-hour period is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	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)
7A	EU	60GG-1	SO <sub>2</sub>	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) § 60.334(h)(1) § 60.334(i) § 60.334(i)(2) § 60.334(j) § 60.334(j)(2)(i) § 60.334(j)(2)(iii)	§ 60.334(i) § 60.334(i)(2)	§ 60.334(j) § 60.334(j)(5)
7A-HRSG	EU	60DB-2	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7A-HRSG	EU	60DB-2	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7A-HRSG	EU	60DB-2	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

## 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)
7A-HRSG	EU	60DB-2	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7B	EP	R1111-1	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
7B	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream with a combined weight of the VOC or classes of compounds specified in § 115.121(c)(1)(B)-(C) of 100 lbs (45.4 kg), or less, in a continuous 24-hour period is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None
7B	EU	60GG-1	SO <sub>2</sub>	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) § 60.334(h)(1) § 60.334(i) § 60.334(i)(2) § 60.334(j) § 60.334(j)(2)(i) § 60.334(j)(2)(iii)	§ 60.334(i) § 60.334(i)(2)	§ 60.334(j) § 60.334(j)(5)

## 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)
7B-HRSG	EU	60DB-2	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7B-HRSG	EU	60DB-2	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7B-HRSG	EU	60DB-2	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7B-HRSG	EU	60DB-2	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

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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)
7C	EP	R1111-1	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
7C	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream with a combined weight of the VOC or classes of compounds specified in § 115.121(c)(1)(B)-(C) of 100 lbs (45.4 kg), or less, in a continuous 24-hour period is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None
7C	EU	60GG-1	SO <sub>2</sub>	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) § 60.334(h)(1) § 60.334(i) § 60.334(i)(2) § 60.334(j) § 60.334(j)(2)(i) § 60.334(j)(2)(iii)	§ 60.334(i) § 60.334(i)(2)	§ 60.334(j) § 60.334(j)(5)
7C-HRSG	EU	60DB-2	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

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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)
7C-HRSG	EU	6oDB-2	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7C-HRSG	EU	6oDB-2	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7C-HRSG	EU	6oDB-2	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7D	EP	R1111-1	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

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7D	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream with a combined weight of the VOC or classes of compounds specified in § 115.121(c)(1)(B)-(C) of 100 lbs (45.4 kg), or less, in a continuous 24-hour period is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None
7D	EU	60GG-1	SO <sub>2</sub>	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) § 60.334(h)(1) § 60.334(i) § 60.334(i)(2) § 60.334(j) § 60.334(j)(2)(i) § 60.334(j)(2)(iii)	§ 60.334(i) § 60.334(i)(2)	§ 60.334(j) § 60.334(j)(5)
7D-HRSG	EU	60DB-3	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7D-HRSG	EU	60DB-3	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

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7D-HRSG	EU	60DB-3	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7D-HRSG	EU	60DB-3	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7E	EP	R1111-1	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
7E	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream with a combined weight of the VOC or classes of compounds specified in § 115.121(c)(1)(B)-(C) of 100 lbs (45.4 kg), or less, in a continuous 24-hour period is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None

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7E	EU	6oGG-1	SO <sub>2</sub>	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) § 60.334(h)(1) § 60.334(i) § 60.334(i)(2) § 60.334(j) § 60.334(j)(2)(i) § 60.334(j)(2)(iii)	§ 60.334(i) § 60.334(i)(2)	§ 60.334(j) § 60.334(j)(5)
7E-HRSG	EU	6oDB-3	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7E-HRSG	EU	6oDB-3	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7E-HRSG	EU	6oDB-3	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

## 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)
7E-HRSG	EU	60DB-3	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7F	EU	60DB-1	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7F	EU	60DB-1	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7F	EU	60DB-1	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

## 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)
7F	EU	60DB-1	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.44b(a)(1)(ii) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Except as in §60.44b(k), (l), on/after §60.8 test, no facility combusting natural gas and distillate oil (high heat release rate) shall discharge gases containing NO <sub>x</sub> in excess of 86 ng/J heat input.	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(4) [G]§ 60.48b(b) § 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f) § 60.48b(g)(1)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h) § 60.49b(h)(4) § 60.49b(i) § 60.49b(v) § 60.49b(w)
7F	EU	63DDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
7G	EP	R1111-1	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

## 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)
7G	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream with a combined weight of the VOC or classes of compounds specified in § 115.121(c)(1)(B)-(C) of 100 lbs (45.4 kg), or less, in a continuous 24-hour period is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None
7G	EU	60GG-1	SO <sub>2</sub>	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) § 60.334(h)(1) § 60.334(i) § 60.334(i)(2) § 60.334(j) § 60.334(j)(2)(i) § 60.334(j)(2)(iii)	§ 60.334(i) § 60.334(i)(2)	§ 60.334(j) § 60.334(j)(5)
7G-HRSG	EU	60DB-3	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7G-HRSG	EU	60DB-3	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

## 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)
7G-HRSG	EU	60DB-3	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7G-HRSG	EU	60DB-3	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7H	EU	60DB-4	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.42b(k)(2)	Units firing only very low sulfur oil and/or a mixture of gaseous fuels with a potential SO <sub>2</sub> emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO <sub>2</sub> emissions limit in §60.42b(k)(1).	§ 60.47b(f)	§ 60.45b(k) § 60.49b(o) § 60.49b(r) [G]§ 60.49b(r)(2)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(r) [G]§ 60.49b(r)(2)
7H	EU	60DB-4	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

### 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)
7H	EU	60DB-4	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7H	EU	60DB-4	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.44b(l)(1) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Affected facilities combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86 ng/JI (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(3) [G]§ 60.48b(b) § 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h) § 60.49b(i) § 60.49b(v) § 60.49b(w)
7H	EU	63DDDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD

## 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)
7J	EU	60DB-4	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.42b(k)(2)	Units firing only very low sulfur oil and/or a mixture of gaseous fuels with a potential SO <sub>2</sub> emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO <sub>2</sub> emissions limit in §60.42b(k)(1).	§ 60.47b(f)	§ 60.45b(k) § 60.49b(o) § 60.49b(r) [G]§ 60.49b(r)(2)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(r) [G]§ 60.49b(r)(2)
7J	EU	60DB-4	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7J	EU	60DB-4	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
7J	EU	60DB-4	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.44b(l)(1) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Affected facilities combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86 ng/JI (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(3) [G]§ 60.48b(b) § 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h) § 60.49b(i) § 60.49b(v) § 60.49b(w)

### 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)
7J	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
7K	EP	R1111-1	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
7K	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream with a combined weight of the VOC or classes of compounds specified in § 115.121(c)(1)(B)-(C) of 100 lbs (45.4 kg), or less, in a continuous 24-hour period is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None
7K	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(C) § 115.127(c)(1)	A vent gas stream having a concentration of the VOC specified in § 115.121(c)(1)(B) and (C) less than 30,000 ppmv is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(C)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(C)	None

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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)
7K	EU	60K K K K K-1	NO <sub>x</sub>	40 CFR Part 60, Subpart K K K K	§ 60.4320(a)-Table 1 § 60.4320(a) § 60.4320(b) § 60.4325 § 60.4333(a) § 60.4333(b)(1) § 60.4335(b)(1) [G]§ 60.4345	Turbines operating at less than 75 percent of peak load, or turbines operating at temperatures less than 0 degrees F with greater than 30 MW output must meet the nitrogen oxides emission standard of 96 ppm at 15 percent O <sub>2</sub> .	§ 60.4333(b)(1) § 60.4335(b)(1) [G]§ 60.4345 § 60.4350(a) § 60.4350(b) § 60.4350(c) § 60.4350(d) § 60.4350(e) § 60.4350(f) § 60.4350(h) [G]§ 60.4400(a) § 60.4400(b) § 60.4400(b)(1) § 60.4400(b)(2) § 60.4400(b)(4) § 60.4400(b)(5) § 60.4400(b)(6) [G]§ 60.4405	[G]§ 60.4345 § 60.4350(b)	[G]§ 60.4345 § 60.4350(d) § 60.4375(a) § 60.4380 [G]§ 60.4380(b) § 60.4395
7K	EU	60K K K K K-1	SO <sub>2</sub>	40 CFR Part 60, Subpart K K K K	§ 60.4330(a)(2) § 60.4333(a)	You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO <sub>2</sub> /J (0.060 lb SO <sub>2</sub> /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.	§ 60.4365 § 60.4365(b) § 60.4415(a) § 60.4415(a)(1) § 60.4415(a)(1)(ii)	§ 60.4365(b)	§ 60.4375(a)

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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)
7K	EU	63YYYY-1	112(B) HAPS	40 CFR Part 63, Subpart YYYY	§ 63.6095(d)	If you start up a new or reconstructed stationary combustion turbine that is a lean premix gas-fired stationary combustion turbine or diffusion flame gas-fired stationary combustion turbine as defined by this subpart, you must comply with the Initial Notification requirements set forth in §63.6145 but need not comply with any other requirement of this subpart until EPA takes final action to require compliance.	None	None	§ 63.6145(a) § 63.6145(b) § 63.6145(c) § 63.6145(d)
7L	EP	R1111-1	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
7L	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream with a combined weight of the VOC or classes of compounds specified in § 115.121(c)(1)(B)-(C) of 100 lbs (45.4 kg), or less, in a continuous 24-hour period is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None

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7L	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(C) § 115.127(c)(1)	A vent gas stream having a concentration of the VOC specified in § 115.121(c)(1)(B) and (C) less than 30,000 ppmv is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(C)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(C)	None
7L	EU	60KKKK-1	NO <sub>x</sub>	40 CFR Part 60, Subpart KKKK	§ 60.4320(a)-Table 1 § 60.4320(a) § 60.4320(b) § 60.4325 § 60.4333(a) § 60.4333(b)(1) § 60.4335(b)(1) [G]§ 60.4345	Turbines operating at less than 75 percent of peak load, or turbines operating at temperatures less than 0 degrees F with greater than 30 MW output must meet the nitrogen oxides emission standard of 96 ppm at 15 percent O <sub>2</sub> .	§ 60.4333(b)(1) § 60.4335(b)(1) [G]§ 60.4345 § 60.4350(a) [G]§ 60.4345 § 60.4350(a) § 60.4350(b) § 60.4350(c) § 60.4350(d) § 60.4350(e) § 60.4350(f) § 60.4350(h) [G]§ 60.4400(a) § 60.4400(b) § 60.4400(b)(1) § 60.4400(b)(2) § 60.4400(b)(4) § 60.4400(b)(5) § 60.4400(b)(6) [G]§ 60.4405	[G]§ 60.4345 § 60.4350(b)	[G]§ 60.4345 § 60.4350(d) § 60.4375(a) § 60.4380 [G]§ 60.4380(b) § 60.4395
7L	EU	60KKKK-1	SO <sub>2</sub>	40 CFR Part 60, Subpart KKKK	§ 60.4330(a)(2) § 60.4333(a)	You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO <sub>2</sub> /J (0.060 lb SO <sub>2</sub> /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.	§ 60.4365 § 60.4365(b) § 60.4415(a) § 60.4415(a)(1) § 60.4415(a)(1)(ii)	§ 60.4365(b)	§ 60.4375(a)

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7L	EU	63YYYY-1	112(B) HAPS	40 CFR Part 63, Subpart YYYY	§ 63.6095(d)	If you start up a new or reconstructed stationary combustion turbine that is a lean premix gas-fired stationary combustion turbine or diffusion flame gas-fired stationary combustion turbine as defined by this subpart, you must comply with the Initial Notification requirements set forth in §63.6145 but need not comply with any other requirement of this subpart until EPA takes final action to require compliance.	None	None	§ 63.6145(a) § 63.6145(b) § 63.6145(c) § 63.6145(d)
GRPFWP-ACE	EU	60III-1	NMHC and NO <sub>x</sub>	40 CFR Part 60, Subpart IIII	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 130 KW and less than or equal to 560 KW and a displacement of less than 30 liters per cylinder and is a 2009 model year and later must comply with an NMHC+NO <sub>x</sub> emission limit of 4.0 g/KW-hr, as listed in Table 4 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

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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)
GRPFWP-ACE	EU	60III-1	PM	40 CFR Part 60, Subpart III	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 130 KW and less than or equal to 560 KW and a displacement of less than 30 liters per cylinder and is a 2009 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as listed in Table 4 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRPFWP-ACE	EU	63ZZZ-1	EXEMPT	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(b)(1) § 63.6595(c) § 63.6640(f)(1) [G]§ 63.6640(f)(2) § 63.6640(f)(3)	An affected source which meets either of the criteria in paragraphs §63.6590(b)(1)(i)-(ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).	None	None	§ 63.6645(c) § 63.6645(f)

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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)
GRPFWP-BD	EU	60III-1	NMHC and NO <sub>x</sub>	40 CFR Part 60, Subpart IIII	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 130 KW and less than or equal to 560 KW and a displacement of less than 30 liters per cylinder and is a 2009 model year and later must comply with an NMHC+NO <sub>x</sub> emission limit of 4.0 g/KW-hr, as listed in Table 4 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRPFWP-BD	EU	60III-1	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 130 KW and less than or equal to 560 KW and a displacement of less than 30 liters per cylinder and is a 2009 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as listed in Table 4 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRPFWP-BD	EU	63ZZZZ-1	EXEMPT	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(b)(1) § 63.6595(c) § 63.6640(f)(1) [G]§ 63.6640(f)(2) § 63.6640(f)(3)	An affected source which meets either of the criteria in paragraphs §63.6590(b)(1)(i)-(ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).	None	None	§ 63.6645(c) § 63.6645(f)
GRPOLDFW P	EU	63ZZZZ-2	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6602-Table2c.1 § 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(h) § 63.6625(i) § 63.6640(b) § 63.6640(f)(1) [G]§ 63.6640(f)(2) § 63.6640(f)(3)	For each existing emergency stationary CI RICE and black start stationary CI RICE, located at a major source, you must comply with the requirements as specified in Table 2c.1.a-c.	§ 63.6625(f) § 63.6625(i) § 63.6640(a) § 63.6640(a)-Table6.9.a.i § 63.6640(a)-Table6.9.a.ii § 63.6640(b)	§ 63.6625(i) § 63.6655(a) § 63.6655(a)(1) § 63.6655(d) § 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6640(b) § 63.6640(e) § 63.6650(f)
TCT01A	blank	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream with a combined weight of the VOC or classes of compounds specified in § 115.121(c)(1)(B)-(C) of 100 lbs (45.4 kg), or less, in a continuous 24-hour period is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	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)
TCT01B	blank	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream with a combined weight of the VOC or classes of compounds specified in § 115.121(c)(1)(B)-(C) of 100 lbs (45.4 kg), or less, in a continuous 24-hour period is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None
XZ-OS01	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

**Additional Monitoring Requirements**

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## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: 012	
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.: R1111-1
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Fuel = pipeline quality natural gas containing no more than 0.25 grain of sulfur per 100 cubic feet of fuel, hydrogen (H <sub>2</sub> ), and process gas (natural gas mixed with up to 28 percent H <sub>2</sub> )	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: 7A	
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.: R1111-1
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Fuel = pipeline quality natural gas containing no more than 0.25 grain of sulfur per 100 cubic feet of fuel, hydrogen (H <sub>2</sub> ), and process gas (natural gas mixed with up to 28 percent H <sub>2</sub> )	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: 7B	
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.: R1111-1
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Fuel = pipeline quality natural gas containing no more than 0.25 grain of sulfur per 100 cubic feet of fuel, hydrogen (H <sub>2</sub> ), and process gas (natural gas mixed with up to 28 percent H <sub>2</sub> )	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: 7C	
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.: R1111-1
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Fuel = pipeline quality natural gas containing no more than 0.25 grain of sulfur per 100 cubic feet of fuel, hydrogen (H <sub>2</sub> ), and process gas (natural gas mixed with up to 28 percent H <sub>2</sub> )	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: 7D	
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.: R1111-1
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Fuel = pipeline quality natural gas containing no more than 0.25 grain of sulfur per 100 cubic feet of fuel, hydrogen (H <sub>2</sub> ), and process gas (natural gas mixed with up to 28 percent H <sub>2</sub> )	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: 7E	
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.: R1111-1
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Fuel = pipeline quality natural gas containing no more than 0.25 grain of sulfur per 100 cubic feet of fuel, hydrogen (H <sub>2</sub> ), and process gas (natural gas mixed with up to 28 percent H <sub>2</sub> )	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: 7G	
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.: R1111-1
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Fuel = pipeline quality natural gas containing no more than 0.25 grain of sulfur per 100 cubic feet of fuel, hydrogen (H <sub>2</sub> ), and process gas (natural gas mixed with up to 28 percent H <sub>2</sub> )	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: 7K	
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.: R1111-1
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Fuel = pipeline quality natural gas containing no more than 0.25 grain of sulfur per 100 cubic feet of fuel, hydrogen (H <sub>2</sub> ), and process gas (natural gas mixed with up to 28 percent H <sub>2</sub> )	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: 7L	
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.: R1111-1
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Fuel = pipeline quality natural gas containing no more than 0.25 grain of sulfur per 100 cubic feet of fuel, hydrogen (H <sub>2</sub> ), and process gas (natural gas mixed with up to 28 percent H <sub>2</sub> )	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: XZ-OSo1	
Control Device ID No.: N/A	Control Device Type: N/A
<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: Structural Integrity of the Pipe	
Minimum Frequency: Emptied and degassed	
Averaging Period: n/a	
Deviation Limit: Failure to conduct necessary repairs to the fill pipe before filling the storage vessel shall be considered and reported as a deviation.	
Periodic Monitoring Text: Inspect to determine the structural integrity of the fill pipe and record each time the storage vessel is emptied and degassed to ensure that it continues to meet the specifications in the above requirement. If the structural integrity of the fill pipe is in question, repairs shall be made before the storage vessel is refilled. It shall be considered and reported as a deviation if the repairs are not completed prior to refilling the storage vessel.	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: XZ-OSo1	
Control Device ID No.: N/A	Control Device Type: N/A
<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: Liquid Level	
Minimum Frequency: End of each loading and unloading operation	
Averaging Period: n/a	
Deviation Limit: Bottom of fill pipe is submerged	
<p>Periodic Monitoring Text: The tank level is monitored by an external site glass. Establish the depth of the highest point of the fill pipe. Mark the depth of the liquid when it is at the depth of the highest point of the fill pipe on the external site glass. Monitor and record the depth of the liquid using the external site glass at the end of each loading and unloading operation. It shall be considered and reported as a deviation anytime the liquid level falls below the highest point of the fill pipe.</p>	

**Permit Shield**

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## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
001	N/A	30 TAC Chapter 112, Sulfur Compounds	The unit is not combusting liquid fuel or solid fossil fuel.
001	N/A	30 TAC Chapter 115, Vent Gas Controls	The facility is a combustion unit for which the combustion is not used as a control device for a vent gas stream that is subject to this rule & the vent gas stream originates from a noncombustion source.
001	N/A	40 CFR Part 60, Subpart D	The boiler does not have capacity of greater than 250 MMBtu/hr.
001	N/A	40 CFR Part 60, Subpart Da	The boiler is not an electric utility steam generating unit.
001	N/A	40 CFR Part 60, Subpart Db	The boiler does not have a heat input capacity greater than 100 MMBtu/hr.
001	N/A	40 CFR Part 60, Subpart Dc	The boiler was constructed before June 9, 1989.
002	N/A	30 TAC Chapter 112, Sulfur Compounds	The unit is not combusting liquid fuel or solid fossil fuel.
002	N/A	30 TAC Chapter 115, Vent Gas Controls	The facility is a combustion unit for which the combustion is not used as a control device for a vent gas stream that is subject to this rule and the vent gas stream originates from a noncombustion source.
002	N/A	40 CFR Part 60, Subpart D	The boiler does not have capacity of greater than 250 MMBtu/hr.
002	N/A	40 CFR Part 60, Subpart Da	The boiler is not an electric utility steam generating unit.
002	N/A	40 CFR Part 60, Subpart Db	The boiler does not have a heat input capacity greater than 100 MMBtu/hr.
002	N/A	40 CFR Part 60, Subpart Dc	The boiler was constructed before June 9, 1989.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
003	N/A	30 TAC Chapter 112, Sulfur Compounds	The unit is not combusting liquid fuel or solid fossil fuel.
003	N/A	30 TAC Chapter 115, Vent Gas Controls	The facility is a combustion unit for which the combustion is not used as a control device for a vent gas stream that is subject to this rule and the vent gas stream originates from a noncombustion source.
003	N/A	40 CFR Part 60, Subpart D	The boiler does not have capacity of greater than 250 MMBtu/hr.
003	N/A	40 CFR Part 60, Subpart Da	The boiler is not an electric utility steam generating unit.
003	N/A	40 CFR Part 60, Subpart Db	The boiler does not have a heat input capacity greater than 100 MMBtu/hr.
003	N/A	40 CFR Part 60, Subpart Dc	The boiler was constructed before June 9, 1989.
012	N/A	30 TAC Chapter 112, Sulfur Compounds	The unit is not combusting liquid fuel or solid fossil fuel.
012	N/A	30 TAC Chapter 115, Vent Gas Controls	The facility is a combustion unit for which the combustion is not used as a control device for a vent gas stream that is subject to this rule and the vent gas stream originates from a noncombustion source.
012	N/A	40 CFR Part 60, Subpart D	The boiler does not have capacity of greater than 250 MMBtu/hr.
012	N/A	40 CFR Part 60, Subpart Da	The boiler is not an electric utility steam generating unit.
012	N/A	40 CFR Part 60, Subpart Dc	The boiler has a heat input capacity greater than 100 MMBtu/hr.
7A	N/A	40 CFR Part 60, Subpart KKKK	Turbine was constructed before February 18, 2005.
7A-HRSG	N/A	30 TAC Chapter 112, Sulfur Compounds	The unit is not combusting liquid fuel or solid fossil fuel.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
7A-HRSG	N/A	40 CFR Part 60, Subpart D	The boiler does not have capacity of greater than 250 MMBtu/hr.
7A-HRSG	N/A	40 CFR Part 60, Subpart Da	The boiler is not an electric utility steam generating unit.
7A-HRSG	N/A	40 CFR Part 60, Subpart Dc	The boiler has a heat input capacity greater than 100 MMBtu/hr.
7B	N/A	40 CFR Part 60, Subpart KKKK	Turbine was constructed before February 18, 2005.
7B-HRSG	N/A	30 TAC Chapter 112, Sulfur Compounds	The unit is not combusting liquid fuel or solid fossil fuel.
7B-HRSG	N/A	40 CFR Part 60, Subpart D	The boiler does not have capacity of greater than 250 MMBtu/hr.
7B-HRSG	N/A	40 CFR Part 60, Subpart Da	The boiler is not an electric utility steam generating unit.
7B-HRSG	N/A	40 CFR Part 60, Subpart Dc	The boiler has a heat input capacity greater than 100 MMBtu/hr.
7C	N/A	40 CFR Part 60, Subpart KKKK	Turbine was constructed before February 18, 2005.
7C-HRSG	N/A	30 TAC Chapter 112, Sulfur Compounds	The unit is not combusting liquid fuel or solid fossil fuel.
7C-HRSG	N/A	40 CFR Part 60, Subpart D	The boiler does not have capacity of greater than 250 MMBtu/hr.
7C-HRSG	N/A	40 CFR Part 60, Subpart Da	The boiler is not an electric utility steam generating unit.
7C-HRSG	N/A	40 CFR Part 60, Subpart Dc	The boiler has a heat input capacity greater than 100 MMBtu/hr.
7D	N/A	40 CFR Part 60, Subpart KKKK	Turbine was constructed before February 18, 2005.
7D-HRSG	N/A	30 TAC Chapter 112, Sulfur Compounds	The unit is not combusting liquid fuel or solid fossil fuel.
7D-HRSG	N/A	40 CFR Part 60, Subpart D	The boiler does not have capacity of greater than 250 MMBtu/hr.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
7D-HRSG	N/A	40 CFR Part 60, Subpart Da	The boiler is not an electric utility steam generating unit.
7D-HRSG	N/A	40 CFR Part 60, Subpart Dc	The boiler has a heat input capacity greater than 100 MMBtu/hr.
7E	N/A	40 CFR Part 60, Subpart KKKK	Turbine was constructed before February 18, 2005.
7E-HRSG	N/A	30 TAC Chapter 112, Sulfur Compounds	The unit is not combusting liquid fuel or solid fossil fuel.
7E-HRSG	N/A	40 CFR Part 60, Subpart D	The boiler does not have capacity of greater than 250 MMBtu/hr.
7E-HRSG	N/A	40 CFR Part 60, Subpart Da	The boiler is not an electric utility steam generating unit.
7E-HRSG	N/A	40 CFR Part 60, Subpart Dc	The boiler has a heat input capacity greater than 100 MMBtu/hr.
7F	N/A	30 TAC Chapter 112, Sulfur Compounds	The unit is not combusting liquid fuel or solid fossil fuel.
7F	N/A	30 TAC Chapter 115, Vent Gas Controls	The facility is a combustion unit for which the combustion is not used as a control device for a vent gas stream that is subject to this rule and the vent gas stream originates from a noncombustion source.
7F	N/A	40 CFR Part 60, Subpart D	The boiler does not have capacity of greater than 250 MMBtu/hr.
7F	N/A	40 CFR Part 60, Subpart Da	The boiler is not an electric utility steam generating unit
7F	N/A	40 CFR Part 60, Subpart Dc	The boiler has a heat input capacity greater than 100 MMBtu/hr
7G	N/A	40 CFR Part 60, Subpart KKKK	Turbine was constructed before February 18, 2005.
7G-HRSG	N/A	30 TAC Chapter 112, Sulfur Compounds	Turbine is not combusting liquid fuel or solid fuel.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
7G-HRSG	N/A	30 TAC Chapter 115, Vent Gas Controls	Turbine is a combustion unit for which the combustion is not used as a control device for a vent gas stream that originates from a non-combustion source.
7G-HRSG	N/A	40 CFR Part 60, Subpart D	Turbine does not have capacity of greater than 250 MMBtu/hr.
7G-HRSG	N/A	40 CFR Part 60, Subpart Da	Turbine is not an electric utility steam generating unit.
7G-HRSG	N/A	40 CFR Part 60, Subpart Dc	Turbine has a heat input capacity greater than 100 MMBtu/hr.
7H	N/A	30 TAC Chapter 112, Sulfur Compounds	Each boiler is not combusting liquid fuel or solid fuel.
7H	N/A	30 TAC Chapter 115, Vent Gas Controls	Each boiler is a combustion unit for which the combustion is not used as a control device for a vent gas stream that originates from a non-combustion source.
7H	N/A	40 CFR Part 60, Subpart D	Each boiler meets applicability to 40 CFR Part 60, Subpart Db and commenced construction, modification, or reconstruction after June 19, 1986 and therefore is not subject to Subpart D.
7H	N/A	40 CFR Part 60, Subpart Da	Each boiler is not an electric utility steam generating unit.
7H	N/A	40 CFR Part 60, Subpart Dc	Each boiler has a heat input capacity greater than 100 MMBtu/hr.
7J	N/A	30 TAC Chapter 112, Sulfur Compounds	Each boiler is not combusting liquid fuel or solid fuel.
7J	N/A	30 TAC Chapter 115, Vent Gas Controls	Each boiler is a combustion unit for which the combustion is not used as a control device for a vent gas stream that originates from a non-combustion source.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
7J	N/A	40 CFR Part 60, Subpart D	Each boiler meets applicability to 40 CFR Part 60, Subpart Db and commenced construction, modification, or reconstruction after June 19, 1986 and therefore is not subject to Subpart D.
7J	N/A	40 CFR Part 60, Subpart Da	Each boiler is not an electric utility steam generating unit.
7J	N/A	40 CFR Part 60, Subpart Dc	Each boiler has a heat input capacity greater than 100 MMBtu/hr.
7K	N/A	40 CFR Part 60, Subpart GG	Turbine was constructed after February 18, 2005.
7K-HRSG	N/A	30 TAC Chapter 112, Sulfur Compounds	Turbine is not combusting liquid fuel or solid fuel.
7K-HRSG	N/A	30 TAC Chapter 115, Vent Gas Controls	Turbine is a combustion unit for which the combustion is not used as a control device for a vent gas stream that originates from a non-combustion source.
7K-HRSG	N/A	40 CFR Part 60, Subpart D	Turbine does not have capacity of greater than 250 MMBtu/hr.
7K-HRSG	N/A	40 CFR Part 60, Subpart Da	Turbine is not an electric utility steam generating unit.
7K-HRSG	N/A	40 CFR Part 60, Subpart Db	Turbine was constructed after February 18, 2005.
7K-HRSG	N/A	40 CFR Part 60, Subpart Dc	Turbine has a heat input capacity greater than 100 MMBtu/hr.
7L	N/A	40 CFR Part 60, Subpart GG	Turbine was constructed after February 18, 2005.
7L-HRSG	N/A	30 TAC Chapter 112, Sulfur Compounds	Turbine is not combusting liquid fuel or solid fuel.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
7L-HRSG	N/A	30 TAC Chapter 115, Vent Gas Controls	Turbine is a combustion unit for which the combustion is not used as a control device for a vent gas stream that originates from a non-combustion source.
7L-HRSG	N/A	40 CFR Part 60, Subpart D	Turbine does not have capacity of greater than 250 MMBtu/hr.
7L-HRSG	N/A	40 CFR Part 60, Subpart Da	Turbine is not an electric utility steam generating unit.
7L-HRSG	N/A	40 CFR Part 60, Subpart Db	Turbine was constructed after February 18, 2005.
7L-HRSG	N/A	40 CFR Part 60, Subpart Dc	Turbine has a heat input capacity greater than 100 MMBtu/hr.
CWTP1	N/A	30 TAC Chapter 115, Industrial Wastewater	Formosa Point Comfort Complex is not located in DFW, BPA, HGA, or El Paso.
CWTP1	N/A	40 CFR Part 63, Subpart G	CWTP1 does not meet the definition of wastewater as defined by 40 CFR Part 63, Subpart F.
DEGREASE 1	N/A	30 TAC Chapter 115, Degreasing Processes	Formosa Point Comfort Complex is not located in DFW, BPA, HGA, or El Paso, Greg, Nueces, or Victoria County.
DEGREASE 2	N/A	30 TAC Chapter 115, Degreasing Processes	Formosa Point Comfort Complex is not located in DFW, BPA, HGA, or El Paso, Greg, Nueces, or Victoria County.
SPRAY PAINT	N/A	30 TAC Chapter 115, Surface Coating Operations	Formosa Point Comfort Complex is not located in DFW, BPA, HGA, or El Paso, Greg, Nueces, or Victoria County.
TET-04	N/A	40 CFR Part 63, Subpart Q	Cooling Towers not using compounds containing chromium on or after September 8, 1994.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
TET07A	N/A	40 CFR Part 63, Subpart Q	Cooling Towers not using compounds containing chromium on or after September 8, 1994.
TET07B	N/A	40 CFR Part 63, Subpart Q	Cooling Towers not using compounds containing chromium on or after September 8, 1994.
TTW-15A	N/A	30 TAC Chapter 115, Storage of VOCs	The storage vessel capacity is less than 1,000 gallons.
TTW-15A	N/A	40 CFR Part 60, Subpart K	The tank was not constructed or modified on or before May 18, 1978.
TTW-15A	N/A	40 CFR Part 60, Subpart Ka	The storage tank was not constructed on or after May 19, 1978 and on or before July 23, 1984.
TTW-15A	N/A	40 CFR Part 60, Subpart Kb	The storage vessel does not have a capacity greater than 75 m <sup>3</sup> .
TTW-15A	N/A	40 CFR Part 63, Subpart OO	The tank is not subject to another subpart within 40 CFR 60, 61, or 63 and references this subpart for control of air emissions.
TTW-15B	N/A	30 TAC Chapter 115, Storage of VOCs	The storage vessel capacity is less than 1,000 gallons.
TTW-15B	N/A	40 CFR Part 60, Subpart K	The tank was not constructed or modified on or before May 18, 1978.
TTW-15B	N/A	40 CFR Part 60, Subpart Ka	The storage tank was not constructed on or after May 19, 1978 and on or before July 23, 1984.
TTW-15B	N/A	40 CFR Part 60, Subpart Kb	The storage vessel does not have a capacity greater than 75 m <sup>3</sup> .
TTW-15B	N/A	40 CFR Part 63, Subpart OO	The storage tank is not subject to another subpart within 40 CFR 60, 61, or 63 that references this subpart for control of air emissions.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
TTW-15C	N/A	30 TAC Chapter 115, Storage of VOCs	The storage vessel capacity is less than 1,000 gallons.
TTW-15C	N/A	40 CFR Part 60, Subpart K	The tank was not constructed or modified on or before May 18, 1978.
TTW-15C	N/A	40 CFR Part 60, Subpart Ka	The storage tank was not constructed on or after May 19, 1978 and on or before July 23, 1984.
TTW-15C	N/A	40 CFR Part 60, Subpart Kb	The storage vessel does not have a capacity greater than 75 m <sup>3</sup> .
TTW-15C	N/A	40 CFR Part 63, Subpart OO	The tank is not subject to another subpart within 40 CFR 60, 61, or 63 and references this subpart for control of air emissions.
TTW-15D	N/A	30 TAC Chapter 115, Storage of VOCs	The storage vessel capacity is less than 1,000 gallons.
TTW-15D	N/A	40 CFR Part 60, Subpart K	The tank was not constructed or modified on or before May 18, 1978.
TTW-15D	N/A	40 CFR Part 60, Subpart Ka	The storage tank was constructed on or after May 19, 1978 and on or before July 23, 1984.
TTW-15D	N/A	40 CFR Part 60, Subpart Kb	The storage vessel does not have a capacity greater than 75 m <sup>3</sup> .
TTW-15D	N/A	40 CFR Part 63, Subpart OO	The storage tank is not subject to another subpart within 40 CFR Part 60, 61, or 63 that references this subpart for control of air emission.
TTW-15E	N/A	30 TAC Chapter 115, Storage of VOCs	The storage vessel capacity is less than 1,000 gallons.
TTW-15E	N/A	40 CFR Part 60, Subpart K	The tank was not constructed or modified on or before May 18, 1978.
TTW-15E	N/A	40 CFR Part 60, Subpart Ka	The storage tank was not constructed on or after May 19, 1978 & on or before July 23, 1984.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
TTW-15E	N/A	40 CFR Part 60, Subpart Kb	The storage vessel does not have a capacity greater than 75 m <sup>3</sup> .
TTW-15E	N/A	40 CFR Part 63, Subpart OO	The storage tank is not subject to another subpart within 40 CFR Part 60, 61, or 63 that references this subpart for control of air emissions.
XZ-OS01	N/A	40 CFR Part 60, Subpart K	The tank was not constructed or modified on or before May 18, 1978.
XZ-OS01	N/A	40 CFR Part 60, Subpart Ka	The storage tank was not constructed on or after May 19, 1978 and on or before July 23, 1984.
XZ-OS01	N/A	40 CFR Part 60, Subpart Kb	The storage vessel does not have a capacity greater than 75 m <sup>3</sup> .
XZ-OS01	N/A	40 CFR Part 63, Subpart OO	The tank is not subject to another subpart within 40 CFR 60, 61, or 63 and references this subpart for control air emissions.
XZ-WS01	N/A	30 TAC Chapter 115, Water Separation	The oil-water separator separates less than 200 gpd.
XZ-WS01	N/A	40 CFR Part 63, Subpart VV	This subpart is not referenced by another applicable subpart of 40 CFR 60, 61, or 63.

**New Source Review Authorization References**

**New Source Review Authorization References ..... 69**

**New Source Review Authorization References by Emission Unit..... 70**

## 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.: PSDTX1230	Issuance Date: 11/30/2012
PSD Permit No.: PSDTX226M7	Issuance Date: 05/28/2013
PSD Permit No.: PSDTX699	Issuance Date: 12/19/2012
PSD Permit No.: PSDTX760M9	Issuance Date: 08/08/2014
<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.: 17030	Issuance Date: 12/19/2012
Authorization No.: 19166	Issuance Date: 08/08/2014
Authorization No.: 7699	Issuance Date: 05/28/2013
Authorization No.: 83763	Issuance Date: 11/30/2012
Authorization No.: HAP10	Issuance Date: 08/08/2014
<b>Permits By Rule (30 TAC Chapter 106) for the Application Area</b>	
Number: 106.321	Version No./Date: 09/04/2000
Number: 106.433	Version No./Date: 09/04/2000
Number: 106.452	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.511	Version No./Date: 09/04/2000
Number: 106.532	Version No./Date: 09/04/2000
Number: 58	Version No./Date: 05/12/1981
Number: 75	Version No./Date: 05/04/1994
Number: 102	Version No./Date: 05/04/1994
Number: 107	Version No./Date: 05/04/1994

## 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
001	BOILER NO. 1	7699, PSDTX226M7
001	BOILER NO. 1 STACK	7699, PSDTX226M7
002	BOILER NO. 2	7699, PSDTX226M7
002	BOILER NO. 2 STACK	7699, PSDTX226M7
003	BOILER NO. 3	7699, PSDTX226M7
003	BOILER NO. 3 STACK	7699, PSDTX226M7
012	38.4 MW GAS TURBINE	17030, PSDTX699
7A	GAS TURBINE #1	19166, PSDTX760M9, HAP10
7A-HRSG	GAS TURBINE #1 HRSG WITH DUCT BURNER	19166, PSDTX760M9, HAP10
7B	GAS TURBINE #2	19166, PSDTX760M9, HAP10
7B-HRSG	GAS TURBINE #2 HRSG WITH DUCT BURNER	19166, PSDTX760M9, HAP10
7C	GAS TURBINE #3	19166, PSDTX760M9, HAP10
7C-HRSG	GAS TURBINE #3 HRSG WITH DUCT BURNER	19166, PSDTX760M9, HAP10
7D	GAS TURBINE #4	19166, PSDTX760M9, HAP10
7D-HRSG	GAS TURBINE #4 HRSG WITH DUCT BURNER	19166, PSDTX760M9, HAP10
7E	GAS TURBINE #5	19166, PSDTX760M9, HAP10
7E-HRSG	GAS TURBINE #5 HRSG WITH DUCT BURNER	19166, PSDTX760M9, HAP10
7F	PACKAGE BOILER	19166, PSDTX760M9, HAP10

## 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
7G	GAS TURBINE #6	19166, PSDTX760M9, HAP10
7G-HRSG	GAS TURBINE #6 HRSG WITH DUCT BURNER	19166, PSDTX760M9, HAP10
7H	PACKAGE BOILER	19166, PSDTX760M9, HAP10
7J	PACKAGE BOILER	19166, PSDTX760M9, HAP10
7K	GAS TURBINE #7	19166, PSDTX760M9, HAP10
7K-HRSG	GAS TURBINE #7 HRSG WITH DUCT BURNER	19166, PSDTX760M9, HAP10
7L	GAS TURBINE #8	19166, PSDTX760M9, HAP10
7L-HRSG	GAS TURBINE #8 HRSG WITH DUCT BURNER	19166, PSDTX760M9, HAP10
CWTP1	COMBINED WATER TREATMENT PLANT	19166, PSDTX760M9, HAP10
DEGREASE 1	DEGREASING UNIT 1	19166, PSDTX760M9, HAP10
DEGREASE 2	DEGREASING UNIT 2	19166, PSDTX760M9, HAP10
FPM-02A	DIESEL FIREWATER PUMP FPM-02A	106.511/09/04/2000
FPM-02B	DIESEL FIREWATER PUMP FPM-02B	106.511/09/04/2000
FPM-02C	DIESEL FIREWATER PUMP FPM-02C	106.511/09/04/2000
FPM-02D	DIESEL FIREWATER PUMP FPM-02D	106.511/09/04/2000
FPM-02E	DIESEL FIREWATER PUMP FPM-02E	106.511/09/04/2000
SPRAY PAINT	SPRAY PAINTING FACILITY	75/05/04/1994
TCT01A	DEGASSIFER VENT	19166, PSDTX760M9, HAP10

### 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
TCT01B	DEGASSIFER VENT	19166, PSDTX760M9, HAP10
TET-04	COOLING TOWER	19166, PSDTX760M9, HAP10
TET07A	COOLING TOWER	19166, PSDTX760M9, HAP10
TET07B	COOLING TOWER	19166, PSDTX760M9, HAP10
TTW-15A	DIESEL STORAGE TANK	19166, PSDTX760M9, HAP10
TTW-15B	DIESEL STORAGE TANK	19166, PSDTX760M9, HAP10
TTW-15C	DIESEL STORAGE TANK	19166, PSDTX760M9, HAP10
TTW-15D	DIESEL STORAGE TANK	19166, PSDTX760M9, HAP10
TTW-15E	DIESEL STORAGE TANK	19166, PSDTX760M9, HAP10
UP-F02A	DIESEL FIREWATER PUMP UP-F02A	106.511/09/04/2000
UP-F02B	DIESEL FIREWATER PUMP UP-F02B	106.511/09/04/2000
UP-F02C	DIESEL FIREWATER PUMP UP-F02C	106.511/09/04/2000
XZ-OS01	WASTE OIL STORAGE VESSEL	19166, PSDTX760M9, HAP10
XZ-WS01	OIL WATER SEPARATOR	19166, PSDTX760M9, HAP10

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

**Appendix B**

**Major NSR Summary Table..... 76**

### Major NSR Summary Table

Permit Number: 17030 and PSDTX699 Issuance Date: 12/19/2012							
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
EPN 012	38.7 MW Gas Turbine	VOC	2.00	8.76	7, 9	7, 9, 11	9, 11
		VOC MSS	2.10	-	7	7, 11, 12	11
		NOx	178.40	785.00	6, 7, 9, 10	7, 9, 11	9, 11
		NOx MSS	200.00	-	7	7, 11, 12	11
		SO2	2.50	10.95	4, 7, 9, 10	4, 7, 9, 11	4, 9, 11
		PM	6.50	28.40	7, 9	7, 9, 11	9, 11
		CO	7.40	36.00	6, 7, 9	7, 9, 11	9, 11
		CO MSS	51.00	-	7	7, 11, 12	11

**Footnotes:**

- (1) Emission point identification – either specific equipment designation or emission point number from a plot plan.
- (2) Specific point source names. 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  
 NOx – oxides of nitrogen  
 SO2 – sulfur dioxide  
 PM – particulate matter, suspended in the atmosphere, including PM10  
 PM10 – particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.  
 CO – carbon monoxide

Permit Number: 19166, HAP10 and PSDTX760M9 Issuance Date: 8/8/2014

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
7A	88 MW (ISO) Gas Turbine GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, or Process Gas	NOx	119.02	460.00	12, 14, 19	2, 12, 16, 19	17
		NOx (6)	175.00	-	12, 14, 19, 26	2, 12, 16, 19, 25	17
		CO	60.13	232.71		2, 16	
		CO (6)	250.00	-	26	2, 16, 25	
		VOC	1.75	7.66	19	2, 16, 19	
		VOC (6)	1.83	-	19, 26	2, 16, 19, 25	
		PM and PM10	5.71	25.01	9	2, 8, 9, 16	8
		SO2	0.83	3.64	8, 14	2, 8, 16	8, 17
7B	88 MW (ISO) Gas Turbine GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, or Process Gas	NOx	119.02	460.00	12, 14, 19	2, 12, 16, 19	17
		NOx (6)	175.00	-	12, 14, 19, 26	2, 12, 16, 19, 25	17
		CO	60.13	232.71		2, 16	
		CO (6)	250.00	-	26	2, 16, 25	
		VOC	1.75	7.66	19	2, 16, 19	
		VOC (6)	1.83	-	19, 26	2, 16, 19, 25	
		PM and PM10	5.71	25.01	9	2, 8, 9, 16	8
		SO2	0.83	3.64	8, 14	2, 8, 16	8, 17

Permit Number: 19166, HAP10 and PSDTX760M9 Issuance Date: 8/8/2014

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
7C	88 MW (ISO) Gas Turbine GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, or Process Gas	NOx	119.02	460.00	8, 12, 14, 19	2, 8, 12, 16, 19	8, 17
		NOx (6)	175.00	-	12, 14, 19, 26	2, 12, 16, 19, 25	17
		CO	60.13	232.71		2, 16	
		CO (6)	250.00	-	26	2, 16, 25	
		VOC	1.75	7.66	19	2, 16, 19	
		VOC (6)	1.83	-	19, 26	2, 16, 19, 25	
		PM and PM10	5.71	25.01	9	2, 8, 9, 16	8
7D	88 MW (ISO) Gas Turbine GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, or Process Gas	NOx	132.02	530.07	8, 13, 14, 19	2, 8, 13, 16, 19	8, 13, 17
		NOx (6)	175.00	-	13, 14, 19, 26	2, 13, 16, 19, 25	13, 17
		CO	59.13	237.09	13	2, 13, 16	13, 17
		CO (6)	250.00	-	13, 26	2, 13, 16, 25	13, 17
		VOC	1.75	7.66	19	2, 16, 19	
		VOC (6)	1.83	-	19, 26	2, 16, 19, 25	
		PM and PM10	5.71	25.01	9	2, 8, 9, 16	8
		SO2	0.83	3.64	8, 14	2, 8, 16	8, 17

Permit Number: 19166, HAP10 and PSDTX760M9 Issuance Date: 8/8/2014

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
7E	88 MW (ISO) Gas Turbine GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, or Process Gas	NOx	132.02	530.07	13, 14, 19	2, 13, 16, 19	13, 17
		NOx (6)	175.00	-	13, 14, 19, 26	2, 13, 16, 19, 25	13, 17
		CO	59.13	237.09	13	2, 13, 16	13, 17
		CO (6)	250.00	-	13, 26	2, 13, 16, 25	13, 17
		VOC	1.75	7.66	19	2, 16, 19	
		VOC (6)	1.83	-	19, 26	2, 16, 19, 25	
		PM and PM10	5.71	25.01	9	2, 8, 9, 16	8
7F	Package Boiler 250 MMBtu/hr	NOx	12.50	54.75	8, 11, 19	2, 8, 11, 16, 19	8, 11
		NOx (6)	22.50	-	11, 19, 26	2, 11, 16, 19, 25	11
		CO	25.00	109.50	11	2, 11, 16	11
		CO (6)	83.00	-	11, 26	2, 11, 16, 25	11
		VOC	0.34	1.51	19	2, 16, 19	
		VOC (6)	1.40	-	19, 26	2, 16, 19, 25	
		PM and PM10	1.25	5.48	9, 11	2, 8, 9, 11, 16	8, 11
7G	83 MW (ISO) Gas Turbine GE Model PG7121(EA)	NOx	38.00	166.44	13, 14, 19, 20	2, 13, 16, 19, 20	13, 17, 20
		NOx (6)	175.00	-	13, 14, 19, 20, 26	2, 13, 16, 19, 20, 25	13, 17, 20
		CO	62.00	271.56	13, 20	2, 13, 16, 20	13, 17, 20
		CO (6)	250.00	-	13, 20, 26	2, 13, 16, 20, 25	13, 17, 20
		VOC	0.55	2.41	19, 20	2, 16, 19, 20	20
		VOC (6)	0.63	-	19, 20, 26	2, 16, 19, 20, 25	20
		PM and PM10	5.00	21.90	9, 20	2, 9, 16, 20	20
	SO2	0.62	2.69	8, 14, 20	2, 8, 16, 20	8, 17, 20	

Permit Number: 19166, HAP10 and PSDTX760M9 Issuance Date: 8/8/2014

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
7H	No. 1 Package Boiler 417 MMBtu/hr	NOx	6.25	27.00	8, 11, 13, 19	2, 8, 11, 13, 16, 19	8, 11, 13, 17
		NOx (6)	42.00	-	11, 13, 19, 26	2, 11, 13, 16, 19, 25	11, 13, 17
		CO	15.40	67.00	11, 13	2, 11, 13, 16	11, 13, 17
		CO (MSS)	153.00	-	11, 13, 26	2, 11, 13, 16, 25	11, 13, 17
		VOC	2.50	10.00	19	2, 16, 19	
		PM and PM10	3.10	13.70	9, 11	2, 8, 9, 11, 16	8, 11
		SO2	0.70	3.00		2, 8, 16	8
		NH3	3.40	9.90	27	27	
7J	No. 2 Package Boiler 417 MMBtu/hr	NOx	6.25	27.00	8, 11, 13, 19	2, 8, 11, 13, 16, 19	8, 11, 13, 17
		NOx (MSS)	42.00	-	11, 13, 19, 26	2, 11, 13, 16, 19, 25	11, 13, 17
		CO	15.40	67.00	11, 13	2, 11, 13, 16	11, 13, 17
		CO (MSS)	153.00	-	11, 13, 26	2, 11, 13, 16, 25	11, 13, 17
		VOC	2.50	10.00	19	2, 16, 19	
		PM / PM10	3.10	13.70	9, 11	2, 8, 9, 11, 16	8, 11
		SO2	0.70	3.00		2, 8, 16	8
		NH3	3.40	9.90	27	27	
CWTP1	Combined Wastewater	VOC	12.50	27.30	10, 19	10, 19	10
TTW-15A	Diesel Storage Tank	VOC	0.06	0.01	19	19	
TTW-15B	Diesel Storage Tank	VOC	0.06	0.01	19	19	
TTW-15C	Diesel Storage Tank	VOC	0.06	0.01	19	19	
TTW-15D	Diesel Storage Tank	VOC	0.06	0.01	19	19	
TTW-15E	Diesel Storage Tank	VOC	0.06	0.01	19	19	

Permit Number: 19166, HAP10 and PSDTX760M9 Issuance Date: 8/8/2014

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
UT-F02A	Diesel Storage Tank	VOC	0.06	0.01	19	19	
UT-F02B	Diesel Storage Tank	VOC	0.06	0.01	19	19	
UT-F02C	Diesel Storage Tank	VOC	0.06	0.01	19	19	
FPM-02A	Diesel Firewater Pump	NO <sub>x</sub>	8.36	0.33	19, 22	19, 22	
		CO	3.19	0.12	22	22	
		VOC	0.18	0.01	19, 22	19, 22	
		PM	0.66	0.03	22	22	
		SO <sub>2</sub>	2.06	0.08	22	22	
FPM-02B	Diesel Firewater Pump	NO <sub>x</sub>	8.36	0.33	19, 22	19, 22	
		CO	3.19	0.12	22	22	
		VOC	0.18	0.01	19, 22	19, 22	
		PM	0.66	0.03	22	22	
		SO <sub>2</sub>	2.06	0.08	22	22	
FPM-02C	Diesel Firewater Pump	NO <sub>x</sub>	8.36	0.33	19, 22	19, 22	
		CO	3.19	0.12	22	22	
		VOC	0.18	0.01	19, 22	19, 22	
		PM	0.66	0.03	22	22	
		SO <sub>2</sub>	2.06	0.08	22	22	
FPM-02D	Diesel Firewater Pump	NO <sub>x</sub>	8.36	0.33	19, 22	19, 22	
		CO	3.19	0.12	22	22	
		VOC	0.18	0.01	19, 22	19, 22	
		PM	0.66	0.03	22	22	
		SO <sub>2</sub>	2.06	0.08	22	22	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
FPM-02E	Diesel Firewater Pump	NOx	8.36	0.33	19, 22	19, 22	
		CO	3.19	0.12	22	22	
		VOC	0.18	0.01	19, 22	19, 22	
		PM	0.66	0.03	22	22	
		SO2	2.06	0.08	22	22	
UP-F02A	Diesel Firewater Pump	NOx	8.68	0.34	19, 22	19, 22	
		CO	1.87	0.07	22	22	
		VOC	0.69	0.03	19, 22	19, 22	
		PM	0.62	0.02	22	22	
		SO2	1.42	0.06	22	22	
UP-F02B	Diesel Firewater Pump	NOx	8.68	0.34	19, 22	19, 22	
		CO	1.87	0.07	22	22	
		VOC	0.69	0.03	19, 22	19, 22	
		PM	0.62	0.02	22	22	
		SO2	1.42	0.06	22	22	
UP-F02C	Diesel Firewater Pump	NOx	8.68	0.34	19, 22	19, 22	
		CO	1.87	0.07	22	22	
		VOC	0.69	0.03	19, 22	19, 22	
		PM	0.62	0.02	22	22	
		SO2	1.42	0.06	22	22	
XZ-OS01	Waste Oil Storage Tank	VOC	0.01	0.01	19	19	
XZ-WS01	Oil-Water Separation System	VOC	0.11	0.25	19	19	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements	
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.	
PCDIESELFUG	PC Plant Fire Water System Fugitives	VOC	0.04	0.16	19	19		
EXPDIESELFUG	Expansion Plant Fire Water System Fugitives	VOC	0.06	0.27	19	19		
7K	Unit No. 7 (GE 7EA)	<i>Normal Operating Emissions</i>						
		NOx	8.50		13, 14, 19, 21	2, 13, 16, 19, 21	13, 17	
		CO	64.69		13, 21	2, 13, 16, 21	13, 17	
		VOC	5.91		19, 21	2, 16, 19, 21		
		SO2	0.80		14, 21	2, 16, 21	17	
		PM	4.66		21	2, 16, 21		
		PM10	4.66		21	2, 16, 21		
		PM2.5	4.66		21	2, 16, 21		
		H2SO4	0.37		21	21		
		(NH4)2SO4	0.50		21	21		
		NH3	15.74		21, 27	21, 27		
		<i>MSS Emissions</i>						
		NOx	175.00		13, 14, 19, 21, 26	2, 13, 16, 19, 21, 25	13, 17	
		CO	220.00		13, 21, 26	2, 13, 16, 21, 25	13, 17	
		VOC	9.00		19, 21, 26	2, 16, 19, 21, 25		
		SO2	0.80		14, 21, 26	2, 16, 21, 25	17	
		PM	4.66		21, 26	2, 16, 21, 25		
		PM10	4.66		21, 26	2, 16, 21, 25		
		PM2.5	4.66		21, 26	2, 16, 21, 25		
		H2SO4	0.37		21, 26	21, 25		

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements	
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.	
		(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	0.50		21, 26	21, 25		
		NH <sub>3</sub>	50.00		21, 26, 27	21, 25, 27		
		<i>Combined Normal and MSS Emissions</i>						
		NO <sub>x</sub>		48.16		13, 14, 19, 21, 26	2, 13, 16, 19, 21, 25	13, 17
		CO		283.04		13, 21, 26	2, 13, 16, 21, 25	13, 17
		VOC		25.04		19, 21, 26	2, 16, 19, 21, 25	
		SO <sub>2</sub>		3.37		14, 21, 26	2, 16, 21, 25	17
		PM		20.31		21, 26	2, 16, 21, 25	
		PM <sub>10</sub>		20.31		21, 26	2, 16, 21, 25	
		PM <sub>2.5</sub>		20.31		21, 26	2, 16, 21, 25	
		H <sub>2</sub> SO <sub>4</sub>		1.55		21, 26	21, 25	
		(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>		2.09		21, 26	21, 25	
		NH <sub>3</sub>		68.60		21, 26, 27	21, 25, 27	
7L	Unit No. 8 (GE 7EA)	<i>Normal Operating Emissions</i>						
		NO <sub>x</sub>	8.50			13, 14, 19, 21	2, 13, 16, 19, 21	13, 17
		CO	64.69			13, 21	2, 13, 16, 21	13, 17
		VOC	5.91			19, 21	2, 16, 19, 21	
		SO <sub>2</sub>	0.80			14, 21	2, 16, 21	17
		PM	4.66			21	2, 16, 21	
		PM <sub>10</sub>	4.66			21	2, 16, 21	
		PM <sub>2.5</sub>	4.66			21	2, 16, 21	
		H <sub>2</sub> SO <sub>4</sub>	0.37			21	21	
		(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	0.50			21	21	
		NH <sub>3</sub>	15.74			21, 27	21, 27	
		<i>MSS Emissions</i>						
NO <sub>x</sub>	175.00			13, 14, 19, 21, 26	2, 13, 16, 19, 21, 25	13, 17		

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements		
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.		
		CO	220.00		13, 21, 26	2, 13, 16, 21, 25	13, 17		
		VOC	9.00		19, 21, 26	2, 16, 19, 21, 25			
		SO2	0.80		14, 21, 26	2, 16, 21, 25	17		
		PM	4.66		21, 26	2, 16, 21, 25			
		PM10	4.66		21, 26	2, 16, 21, 25			
		PM2.5	4.66		21, 26	2, 16, 21, 25			
		H2SO4	0.37		21, 26	21, 25			
		(NH4)2SO4	0.50		21, 26	21, 25			
		NH3	50.00		21, 26, 27	21, 25, 27			
		<i>Combined Normal and MSS Emissions</i>							
		NOx		48.16		13, 14, 19, 21, 26	2, 13, 16, 19, 21, 25	13, 17	
		CO		283.04		13, 21, 26	2, 13, 16, 21, 25	13, 17	
		VOC		25.04		19, 21, 26	2, 16, 19, 21, 25		
		SO2		3.37		14, 21, 26	2, 16, 21, 25	17	
		PM		20.31		21, 26	2, 16, 21, 25		
		PM10		20.31		21, 26	2, 16, 21, 25		
		PM2.5		20.31		21, 26	2, 16, 21, 25		
		H2SO4		1.55		21, 26	21, 25		
		(NH4)2SO4		2.09		21, 26	21, 25		
		NH3		68.60		21, 26, 27	21, 25, 27		
7K-LOVENT	Combustion Turbine 7 Lube Oil Vent	VOC	0.09	0.40	19	19			
		PM	0.09	0.40					
		PM10	0.09	0.40					
		PM2.5	0.09	0.40					

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
7L-LOVENT	Combustion Turbine 8 Lube Oil Vent	VOC	0.09	0.40	19	19	
		PM	0.09	0.40			
		PM10	0.09	0.40			
		PM2.5	0.09	0.40			
7K-NGVENT	Combustion Turbine 7 Natural Gas Vent	VOC	1.75	0.01	19	2, 16, 19	
7L-NGVENT	Combustion Turbine 8 Natural Gas Vent	VOC	1.75	0.01	19	2, 16, 19	
NG-FUG	Natural Gas and OL Tail Gas Fugitives (5)	VOC	0.07	0.31	19	19	
NH3-FUG	Aqueous Ammonia Fugitives	NH3	0.23	1.01	28	28	
TURB-MSS	ILE Turbine Maintenance Fugitives (5)	NOx	< 0.01	< 0.01	19, 26	19, 25	
		CO	< 0.01	< 0.01	26	25	
		VOC	0.47	< 0.01	19, 26	19, 25	
		PM	0.58	0.03	26	25	
		PM10	0.58	0.03	26	25	
		PM2.5	0.58	0.03	26	25	
		NH3	75.7	0.76	26	25	

**Footnotes:**

- (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) Exempt Solvent - Those carbon compounds or mixtures of carbon compounds used as solvents which have been excluded from the definition of volatile organic compound.
  - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
  - NOx - 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
- (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) MSS-Maintenance, startup-shutdown emissions

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			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
1	Boiler No. 1	VOC	0.23	0.07	5		
		NO <sub>x</sub>	8.48	2.57	5		
		SO <sub>2</sub>	0.05	0.02	5		
		PM	0.76	0.23	5, 7		
		CO	1.29	0.39	5		
2	Boiler No. 2	VOC	0.23	0.07	5		
		NO <sub>x</sub>	8.48	2.57	5		
		SO <sub>2</sub>	0.05	0.02	5		
		PM	0.76	0.23	5, 7		
		CO	1.29	0.39	5		
3	Boiler No. 3	VOC	0.23	0.07	5		
		NO <sub>x</sub>	8.48	2.57	5		
		SO <sub>2</sub>	0.05	0.02	5		
		PM	0.76	0.23	5, 7		
		CO	1.29	0.39	5		

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
006A, B, C	Incinerator/Scrubbers (6) (12)	VOC	0.32	1.41	10, 11, 12, 13, 15, 33	11, 12, 13, 15, 31, 32, 33, 34	11, 13, 15
		NO <sub>x</sub>	4.24	18.60	11, 12, 13	11, 12, 13, 31, 32	11, 13
		PM	1.24	5.43	7, 11, 12, 13, 38	11, 12, 13, 31, 32	11, 13
		CO	0.89	3.88	11, 12, 13	11, 12, 13, 31, 32	11, 13
		Cl <sub>2</sub>	2.01	8.80	11, 12, 13, 15	11, 12, 13, 15, 31, 32	11, 13, 15
		HCl	1.03	4.51	11, 12, 13, 15	11, 12, 13, 15, 31, 32	11, 13, 15
		VCM	1.43	6.26	11, 12, 13, 21, 22, 23, 33	11, 12, 13, 21, 22, 23, 31, 32, 33, 34	11, 13, 21
EDC	(8)	(8)	10, 11, 12, 13, 21, 22, 23, 24, 33	11, 12, 13, 21, 22, 23, 31, 32, 33, 34	11, 13, 21		
006D, E	Incinerator/Scrubbers (7) (12)	VOC	0.53	2.02	10, 11, 12, 13, 15, 33	11, 12, 13, 15, 31, 32, 33, 34	11, 13, 15
		NO <sub>x</sub>	3.08	13.05	10, 11, 12, 13	11, 12, 13, 31, 32	11, 13
		SO <sub>2</sub>	0.01	0.02	10, 11, 12, 13, 15	11, 12, 13, 15, 31, 32	11, 13, 15
		PM	0.70	3.07	7, 10, 11, 12, 13, 38	11, 12, 13, 31, 32	11, 13
		CO	7.66	32.98	10, 11, 12, 13	11, 12, 13, 31, 32	11, 13
		Cl <sub>2</sub>	2.90	12.46	10, 11, 12, 13, 15	11, 12, 13, 15, 31, 32	11, 13, 15
		HCl	2.17	9.32	10, 11, 12, 13, 15	11, 12, 13, 15, 31, 32	11, 13, 15
		VCM	0.15	0.54	10, 11, 12, 13, 21, 22, 23, 33	11, 12, 13, 21, 22, 23, 31, 32, 33, 34	11, 13, 21
EDC	(8)	(8)	10, 11, 12, 13, 21, 22, 23, 24, 33	11, 12, 13, 21, 22, 23, 31, 32, 33, 34	11, 13, 21		

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
007-1	Fugitives (5)	VOC	0.29	1.26	17, 18, 19	17, 18	17
		Cl <sub>2</sub>	0.01	0.05	20	20	17
		HCl	0.31	1.37	20	20	17
		VCM	1.79	7.85	17, 18, 19, 21, 22, 23	17, 18, 21, 22, 23	17, 21
		EDC	1.34	5.86	17, 18, 19, 21, 22, 23, 24	17, 18, 21, 22, 23	17, 21
209A	Catalyst Hoppers Cyclone Separator Bag Filters	PM	0.07	0.03	7, 8, 9	8, 9	
209D	Catalyst Hoppers Cyclone Separator Bag Filters	PM	0.07	0.03	7, 8, 9	8, 9	
312	Silos (9)	PM	0.81	3.55	7		
313A-N 313A-S	PVC A Dryer Stacks (11)	VOC	2.06	-	4	4	4
		PM	1.07	-	7		
		VCM	1.83	-	21, 22, 23	21, 22, 23	21
313B-N 313B-S	PVC B Dryer Stacks (11)	VOC	2.06	-	4	4	4
		PM	1.07	-	7		
		VCM	1.83	-	21, 22, 23	21, 22, 23	21
313C-N 313C-S	PVC C Dryer Stacks (11)	VOC	2.06	-	4	4	4
		PM	1.07	-	7		
		VCM	1.83	-	21, 22, 23	21, 22, 23	21
313D-N 313D-S	PVC D Dryer Stacks (11)	VOC	2.06	-	4	4	4
		PM	1.07	-	7		
		VCM	1.83	-	21, 22, 23	21, 22, 23	21
313E-N 313E-S	PVC E Dryer Stacks (11)	VOC	2.06	-	4	4	4
		PM	1.07	-	7		
		VCM	1.83	-	21, 22, 23	21, 22, 23	21

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
313F-N 313F-S	PVC F Dryer Stacks (11)	VOC	2.06	-	4	4	4
		PM	1.07	-	7		
		VCM	1.83	-	21, 22, 23	21, 22, 23	21
313G-N 313G-S	PVC G Dryer Stacks (11)	VOC	2.06	-	4	4	4
		PM	1.07	-	7		
		VCM	1.83	-	21, 22, 23	21, 22, 23	21
313H	PVC Dryer H	VOC	2.06	-	4, 15	4, 15	4, 15
		PM	0.98	-	7, 15	15	15
		VCM	1.83	-	15, 21, 22, 23	15, 21, 22, 23	15, 21
313I	PVC Dryer I	VOC	8.87	-	4, 15	4, 15	4, 15
		PM	0.98	-	7, 15	15	15
		VCM	1.83	-	15, 21, 22, 23	15, 21, 22, 23	15, 21
313A through 313I	PVC Dryers A – I (10)	VOC	-	35.03	4	4	4
		PM	-	35.48	7		
		VCM	-	16.80	21, 22, 23	21, 22, 23	21
415	EDC Cracker No. 3	VOC	0.17	0.71	5		
		NO <sub>x</sub>	3.30	14.45	5		
		SO <sub>2</sub>	0.03	0.14	5		
		PM	0.57	2.35	5, 7		
		CO	1.03	4.23	5		
416	EDC Cracker No. 4 and Hot Oil Heater	VOC	0.08	0.33	5		
		NO <sub>x</sub>	3.09	13.53	5		
		SO <sub>2</sub>	0.01	0.04	5		
		PM	0.11	0.48	5, 7		
		CO	0.86	3.77	5		

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			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
417	EDC Cracker No. 5	VOC	0.15	0.67	5		
		NO <sub>x</sub>	3.30	14.45	5		
		SO <sub>2</sub>	0.03	0.14	5		
		PM	0.75	3.30	5, 7		
		CO	1.93	8.43	5		
418	EDC Cracker No. 6	VOC	0.15	0.67	5		
		NO <sub>x</sub>	3.30	14.45	5		
		SO <sub>2</sub>	0.03	0.14	5		
		PM	0.75	3.30	5, 7		
		CO	1.93	8.43	5		
419	EDC Cracker No. 7	VOC	0.36	1.59	5		
		NO <sub>x</sub>	4.06	17.80	5, 6		
		SO <sub>2</sub>	0.04	0.17	5		
		PM	0.50	2.20	5, 7		
		CO	2.37	10.38	5		
420	EDC Cracker No. 8	VOC	0.53	2.34	5		
		NO <sub>x</sub>	2.97	13.00	5, 6, 10, 15	15	15
		SO <sub>2</sub>	0.06	0.25	5		
		PM	0.74	3.23	5, 7		
		CO	4.95	21.66	5, 10, 15	15	15
801 through 803	PVC Compounding	VOC	5.80	1.70			
		PM	2.28	10.00	7		

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
999	Cooling Tower (5)	VOC	2.06	9.03	14	14	
		VCM	0.34	1.51	14, 21, 22, 23	14, 21, 22, 23	21
		EDC	0.34	1.51	14, 21, 22, 23, 24	14, 21, 22, 23	21
BF-901A	BT-901A Silo Bagfilter	PM	0.03	0.12	7, 8, 9	8, 9	
BF-901B	BT-901B Silo Bagfilter	PM	0.03	0.12	7, 8, 9	8, 9	
CF-803A	CT-810A Silo Bagfilter	PM	0.09	0.41	7, 8, 9	8, 9	
CF-803B	CT-810B Silo Bagfilter	PM	0.09	0.41	7, 8, 9	8, 9	
CF-803C	CT-810C Silo Bagfilter	PM	0.09	0.41	7, 8, 9	8, 9	
CF-803D	CT-810D Silo Bagfilter	PM	0.09	0.41	7, 8, 9	8, 9	
CF-805A	CT-818A Silo Bagfilter	PM	0.11	0.41	7, 8, 9	8, 9	
CF-805C	CT-818C Silo Bagfilter	PM	0.11	0.41	7, 8, 9	8, 9	
CF-812	Oversize PVC Bagfilter	PM	0.30	0.51	7, 8, 9	8, 9	
CF-813A	CT-817A Silo Bagfilter	PM	0.09	0.41	7, 8, 9	8, 9	
CF-813B	CT-817B Silo Bagfilter	PM	0.09	0.41	7, 8, 9	8, 9	
CF-813C	CT-817C Silo Bagfilter	PM	0.09	0.41	7, 8, 9	8, 9	
CF-813D	CT-817D Silo Bagfilter	PM	0.09	0.41	7, 8, 9	8, 9	
CS-002	Offgrade PVC Dryer Separator	PM	0.72	1.80	7		
CT-811A	Calcium Carbonate Tank	PM	0.01	0.01	7		
CT-811B	Calcium Carbonate Tank	PM	0.01	0.01	7		
CT-811C	Calcium Carbonate Tank	PM	0.01	0.01	7		
CT-811D	Calcium Carbonate Tank	PM	0.01	0.01	7		
CT-814A	Titanium Dioxide Tank	PM	0.01	0.01	7		

Permit Number: 7699 and PSDTX266M7 Issuance Date: 5/28/2013

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
CT-814B	Titanium Dioxide Tank	PM	0.01	0.01	7		
CT-814C	Titanium Dioxide Tank	PM	0.01	0.01	7		
CT-814D	Titanium Dioxide Tank	PM	0.01	0.01	7		
CT-819A	Calcium Carbonate/ Titanium Dioxide Tank	PM	0.01	0.01	7		
CT-819B	Calcium Carbonate/ Titanium Dioxide Tank	PM	0.01	0.01	7		
PF582	Vacuum System Bag Filter	PM	0.17	0.71	7, 8, 9	8, 9	
PF-601I	PT-601I Silo Bagfilter	PM	0.03	0.12	7, 8, 9	8, 9	
PF-601J	PT-601J Silo Bagfilter	PM	0.03	0.12	7, 8, 9	8, 9	
PF-606A	PT-606A Silo Bagfilter	PM	0.03	0.12	7, 8, 9	8, 9	
PF-606B	PT-606B Silo Bagfilter	PM	0.03	0.12	7, 8, 9	8, 9	
PF-606C	PT-606C Silo Bagfilter	PM	0.03	0.12	7, 8, 9	8, 9	
PF-607A	PT-607A Silo Bagfilter	PM	0.03	0.12	7, 8, 9	8, 9	
PF-607B	PT-607B Silo Bagfilter	PM	0.03	0.12	7, 8, 9	8, 9	
PF-607C	PT-607C Silo Bagfilter	PM	0.03	0.12	7, 8, 9	8, 9	
PF-607D	PT-607D Silo Bagfilter	PM	0.03	0.12	7, 8, 9	8, 9	
PF-608A	PT-607A/B Rotary Valve Bagfilter	PM	0.03	0.08	7, 8, 9	8, 9	
PF-608B	PT-607C/D Rotary Valve Bagfilter	PM	0.03	0.08	7, 8, 9	8, 9	
PT-421	Organic Peroxide Tank	VOC	0.01	0.01	26, 35	35	
PT-422	Organic Peroxide Tank	VOC	0.01	0.01	26, 35	35	
PT-423	Organic Peroxide Tank	VOC	0.01	0.01	26, 35	35	
PT-424	Organic Peroxide Tank	VOC	0.01	0.01	26, 35	35	
PT-425	Organic Peroxide Tank	VOC	0.01	0.01	26, 35	35	

Permit Number: 7699 and PSDTX266M7 Issuance Date: 5/28/2013

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
PT-426	Organic Peroxide Tank	VOC	0.01	0.01	26, 35	35	
VC-641A	Decoke Scrubber	PM	14.92	0.48	7, 27	27	27
		CO	1.66	0.03	27	27	27
VC-641G	Decoke Scrubber	PM	22.3	0.09	7, 27	27	27
		CO	2.18	0.01	27	27	27
VC-641D	Decoke Scrubber	PM	19.69	0.05	7, 27	27	27
		CO	4.20	0.18	27	27	27
VC-641H	Decoke Scrubber	PM	22.30	0.09	7, 27	27	27
		CO	4.20	0.18	27	27	27
VR-290	Catoxid Reactor Vent	VOC	0.08	0.01			
		NO <sub>x</sub>	3.34	0.13			
		SO <sub>2</sub>	0.01	0.01			
		PM	2.50	0.10	7		
VT-611A	Groundwater Tank	CO	79.00	3.16			
		VOC	0.01	0.01	35	35	
VT-680	Wastewater Tank	VOC	0.10	0.14	16, 35	16, 35	
		VCM	0.11	0.14	16, 21, 22, 23, 35	16, 21, 22, 23, 35	21
		EDC	0.08	0.12	16, 21, 22, 23, 24, 35	16, 21, 22, 23, 35	21
VT(7)68	Kerosene Tank	VOC	0.74	0.01	35	35	
VW-C11	Cooling Tower (5)	VCM	1.60	7.02	14, 21, 22, 23	14, 21, 22, 23	21
		EDC	0.40	1.75	14, 21, 22, 23, 24	14, 21, 22, 23	21
<b>Maintenance, Startup, and Shutdown (MSS)</b>							
007-1-MSSPVC	Emissions to Atmosphere	VOC	502.10	2.80	33, 35	31, 32, 33, 34, 35	
		PM	16.70	0.31	7, 35	31, 32, 35	

Permit Number: 7699 and PSDTX266M7 Issuance Date: 5/28/2013							
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
007-1-MSSVCM	Emissions to Atmosphere	VOC	1972.00	14.70	33, 35	31, 32, 33, 34, 35	
		PM	5.50	0.21	7, 35	31, 32, 35	
		PM <sub>10</sub>	2.59	0.10	7, 35	31, 32, 35	
		PM <sub>2.5</sub>	0.39	0.02	7, 35	31, 32, 35	
		HCl	90.00	1.31	35	31, 32, 35	

**Footnotes:**

- (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  
NOx - 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  
VCM - vinyl chloride monomer  
EDC - ethylene dichloride
- (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) Emission Point Nos. (EPN) 006A, B, and C represents three separate emissions points. Emissions shown are the maximum allowable rates for the three incinerator/scrubber trains combined.
- (7) The EPNs 006D and E represent two separate emissions points. Emissions shown are the maximum allowable rates for the two incinerator/scrubber trains combined.
- (8) Total EDC emissions for Incinerator/Scrubber Systems 006A through 006E (EPNs 006A, B, C, D, and E) are 0.713 pounds per hour and 3.032 tons per year.

- (9) Combined emissions rate for the following product storage silos (1,000-ton capacity) and loading silos (100 ton capacity): PT-601A through H, PT-602A through E, PT-602G, PT-603, CT-818B, and CT-818D.
- (10) Cumulative annual emission rate limits for all PVC dryers.
- (11) Dryers 313A through 313G each have identical adjacent vent stacks. Allowable emission rates shown are totals for both stacks combined.
- (12) Includes MSS emissions.

Permit Number: 83763 and PSDTX1230 Issuance Date: 11/30/2012

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
SITE-MNT PAINT	Site-Wide Maintenance - Bulk Painting	VOC	21.12	7.3		2, 5	
		PM	6.09	2.1		2, 5	
		PM <sub>10</sub>	1.87	0.03		2, 5	
		PM <sub>2.5</sub>	0.19	0.003		2, 5	
		IOC-U	0.10	0.008		2, 5	
SITE-MNT SHOPS	Site-Wide Maintenance - Spot Usage	VOC	34.35	9.5		2	
		PM	0.06	0.004		2	
		PM <sub>10</sub>	0.06	0.004		2	
		PM <sub>2.5</sub>	0.002	0.0001		2	
		IOC-U	0.10	0.0012		2	
		Exempt Solvents	3-5	1.7		2	
SITE-MNT BLAST	Site-Wide Outdoor Abrasive Blasting	PM	3.43	0.20		2, 6	
		PM <sub>10</sub>	0.41	0.02		2, 6	
		PM <sub>2.5</sub>	0.06	0.01		2, 6	
SITE-ILE	Site-Wide Inherently Low Emitting Maintenance Activities	VOC	0.21	0.10		2	
EP-4	EDC Unit Degreaser	VOC	0.14	0.60		2, 8	
EP-6	Ethylene Glycol Unit Degreaser	VOC	0.14	0.60		2, 8	
EP-7	Olefins I Solvent Degreaser	VOC	0.14	0.60		2, 8	

Permit Number: 83763 and PSDTX1230 Issuance Date: 11/30/2012

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
EP-9	Olefins II Solvent Degreaser	VOC	0.14	0.60		2, 8	
EP-10	PO II Solvent Degreaser	VOC	0.14	0.60		2, 8	
LL-EP-8	LLDPE/PO I Solvent Degreaser	VOC	0.14	0.60		2, 8	

**Footnotes:**

- (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) Exempt Solvent - Those carbon compounds or mixtures of carbon compounds used as solvents which have been excluded from the definition of volatile organic compound.
  - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
  - IOC-U - inorganic compounds (unspeciated)
  - PM - total particulate matter, suspended in the atmosphere, including PM10 and PM2.5, as represented
  - PM10 - total particulate matter equal to or less than 10 microns in diameter, including PM2.5, as represented
  - PM2.5 - particulate matter equal to or less than 2.5 microns in diameter
- (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.



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
AIR QUALITY PERMIT



*A Permit Is Hereby Issued To*  
**Formosa Plastics Corporation, Texas**  
*Authorizing the Continued Operation of*  
**Gas Turbine Cogeneration Facility**  
*Located at Point Comfort, Calhoun County, Texas*  
Latitude 28° 41' 20" Longitude 96° 32' 50"

Permits: 17030 and PSDTX699

Issuance Date : December 19, 2012

Renewal Date: December 19, 2022

  
For the Commission

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

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

## SPECIAL CONDITIONS

Permit Numbers 17030 and PSD-TX-699

### EMISSION STANDARDS AND FUEL SPECIFICATIONS

1. This permit covers only those sources of emissions listed in the attached table entitled ■Emission Sources - Maximum Allowable Emission Rates,• and those sources are limited to the emission limits and other conditions specified in that attached table. Annual emission rates are calculated over a rolling 12-month period. **(08/08)**
2. Fuel used in the Turbine (Emission Point No. [EPN] 012) shall be limited to pipeline-quality, sweet natural gas (NG). The NG shall contain no more than 0.25 grain of hydrogen sulfide and 5 grains of total sulfur per 100 dscf. Use of any other fuel shall require a permit amendment.
3. Opacity of emissions from the turbines referenced in Special Condition No. 9 shall not exceed 5% averaged over a six-minute period, except for a one-hour period during start-up or shutdown.
4. This facility shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources General Provisions, Industrial-Commercial-Institutional Steam Generating Units, and Stationary Gas Turbines in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Subparts A, Db, and GG.
5. The concentration of nitrogen oxides (NO<sub>x</sub>) in the stack gases from the turbines shall not exceed 94 parts per million by dry volume at 15% oxygen (O<sub>2</sub>), adjusted to ISO standard ambient conditions as specified in 40 CFR § 60.335(c)(1). The adjusted NO<sub>x</sub> emission level shall be used to determine compliance with this condition.

The concentration above do not apply to emission from startup or shutdown events. Startup or shutdown events shall not exceed 3 hours per event and 360 hours annually. **(08/08)**

6. The steam-to-fuel ratio at all loads shall be greater than 0.515 in order to achieve compliance with the concentration limit stated in Special Condition No. 5. To modify the steam-to-fuel ratio, stack sampling of carbon monoxide (CO) and NO<sub>x</sub> concurrently shall be required during operation of the turbine at four loads, including the minimum point in the normal operating range and the peak load for the atmospheric condition during the test. All loads shall be corrected to 59EF, 60 percent humidity, and 14.7 psia pressure using appropriate equations supplied by the turbine manufacturer. The NO<sub>x</sub> concentrations shall be corrected according to

## SPECIAL CONDITIONS

Permit Numbers 17030 and PSD-TX-699

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- Special Condition No. 5. The highest steam-to-fuel ratio achieved with compliance shall be used as a minimum for compliance purposes.
7. The holder of this permit shall install and operate a continuous monitoring system to monitor and record the NG consumption and ratio of steam to fuel being fired in the turbine. This system shall be accurate to  $\nabla$  5.0 percent and shall be approved by the Executive Director of the Texas Commission on Environmental Quality (TCEQ). Any one-hour period of turbine operation, except during start-up, during which the steam-to-fuel ratio falls below the highest steam-to-fuel ratio determined in Special Condition No. 6, may, at the discretion of the TCEQ, be used to determine violations of the emission limitations of Special Condition No. 5.
  8. At least two of the three Boilers (identified as EPNs 001, 002, and 003) shall be shut down upon start-up of the gas turbine and shall remain shut down whenever the gas turbine operates.

## TESTING REQUIREMENTS

9. Upon request of the TCEQ Executive Director or any air pollution control program having jurisdiction, the holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere by the turbine. The testing required by this special condition shall be used to determine initial compliance with Special Condition No. 1. Initial compliance with the permit opacity limit shall be demonstrated on the basis of 30 six-minute averages as described in 40 CFR § 60.11(b). Sampling must be conducted in accordance with appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with EPA Reference Method 9 for opacity, Reference Method 10 for CO, Reference Method 7E for NO<sub>x</sub>, Reference Method 5 for particulate matter modified to include particulate caught by the impinger train (i.e., front and back-half catch), and Reference Method 3 for O<sub>2</sub> or equivalent methods. The holder of this permit is responsible for providing the sampling and testing facilities, conducting the sampling and testing operation, and all associated expenses.
  - A. The TCEQ Regional Office with jurisdiction shall be notified as soon as testing is scheduled but not less than 45 days prior to sampling, to arrange a pretest meeting. The notice shall include:
    - (1) The date selected for the pretest meeting.
    - (2) The date sampling will occur.

## SPECIAL CONDITIONS

Permit Numbers 17030 and PSD-TX-699

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- (3) The firm selected to conduct the sampling.
- (4) The type of sampling equipment to be used.
- (5) The methods or procedures to be used.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

- B. Air contaminants emitted from the turbine to be tested at design maximum conditions include (but are not limited to) NO<sub>x</sub>, CO, volatile organic compounds, and opacity.
- C. Sampling reports shall comply with the provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. Copies of the sampling report shall be distributed as follows:

One copy to the TCEQ Regional Office

One copy to the appropriate local air pollution control program

One copy to the TCEQ Office of Permitting, Remediation, and Registration, Air Permits Division, Austin

One copy to the EPA Region 6 Office, Dallas

- D. The cogeneration facility's gas turbine stack was sampled during the 4<sup>th</sup> quarter of 1996 per the requirements of the original permit.

## CONTINUOUS DETERMINATION OF COMPLIANCE

10. The holder of this permit shall monitor the fuels fired in the equipment authorized by this permit for fuel-bound sulfur and nitrogen as specified in 40 CFR § 60.334(b). Any request for a custom monitoring schedule shall be made in writing and directed to the Executive Director of the TCEQ, although authority for granting such custom schedules remains with the EPA. Any custom schedule approved by EPA pursuant to 40 CFR § 60.334 will be recognized as enforceable conditions of this permit provided that the holder of this permit demonstrates that the conditions of such custom schedule will be adequate to demonstrate continuous compliance. Compliance with NO<sub>x</sub> shall be demonstrated as specified in the monitoring requirements of 40 CFR § 60.334(b). Reference Special Condition No. 4.

## SPECIAL CONDITIONS

Permit Numbers 17030 and PSD-TX-699

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### RECORDKEEPING AND REPORTING REQUIREMENTS

11. A copy of the current permit shall be kept for the life of the permit and shall be made available to TCEQ, EPA, or any air pollution control agency with jurisdiction.

The following information shall be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and shall be made immediately available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction:

- A. A complete copy of the testing reports and records of all performance testing administered to demonstrate compliance with the amended permit.
- B. Stack sampling results, stack emission monitoring results, and/or other testing (other than continuous emission monitoring system data) conducted on the cogeneration gas turbine facility under this permit.
- C. All steam-to-fuel ratio records made shall be maintained as specified by Special Condition No. 6.
- D. A summary of noncompliance emission periods, the corrective actions taken during each period, and equipment malfunctions which result in excessive pollutant emissions shall be reported as required in 40 CFR Part 60, Subparts A and GG and as referenced in Special Condition No. 4.
- E. The hours of operation of the turbine, average daily quantity of natural gas-fired in the turbine, the sulfur content of the natural gas fuel, and the operation hours of the Boilers (EPNs 001, 002, and 003) including each start-up and shutdown.
- F. Records of planned MSS activities, date, time, and duration of activity. **(08/08)**

### MAINTENANCE, START-UP, AND SHUTDOWN

12. This permit authorizes start-up and shutdown activities of the 38.7 MW Gas Turbine (Emission Point No. [EPN] 012) and turbine compressor cleaning as planned maintenance activity.

Other maintenance activities are not authorized by this permit. These emissions are subject to the maximum allowable emission rates indicated on the MAERT. The performance of each

## SPECIAL CONDITIONS

Permit Numbers 17030 and PSD-TX-699

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maintenance activity and the emissions associated with it shall be recorded and the rolling 12-month emissions shall be updated on a monthly basis. These records shall include at least the following information:

- A. The physical location at which emissions from the MSS activity occurred, including the emission point number, common name, and any other identifier for the point at which the emissions were released into the atmosphere;
- B. The type of planned maintenance, startup, or shutdown activity and the reason for the planned activity;
- C. The common name and the facility identification number of the facilities at which the MSS activity and emissions occurred;
- D. The date and time of the MSS activity and its duration;
- E. The estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.  
**(08/08)**

## ADDITIONAL CONDITIONS

- 13. The holder of this permit shall display the following in a conspicuous location on the gas turbine cogeneration facility:
  - A. The facility identification number as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The EPN as listed on the maximum allowable emission rates table.

Dated August 5, 2008

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 17030 and PSD-TX-699

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. 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 *	
			lb/hr	TPY
EPN 012	38.7 MW Gas Turbine	VOC	2.00	8.76
		VOC **	2.10	---
		NO <sub>x</sub>	178.40	785.00
		NO <sub>x</sub> **	200.00	---
		SO <sub>2</sub>	2.50	10.95
		PM	6.50	28.40
		CO	7.40	36.00
		CO **	51.00	---

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.

(2) Specific point source names. 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> - oxides of nitrogen

SO<sub>2</sub> - sulfur dioxide

PM - particulate matter, suspended in the atmosphere, including PM<sub>10</sub>.

PM<sub>10</sub> - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.

CO - carbon monoxide

\* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

\_\_\_ Hrs/day \_\_\_ Days/week \_\_\_ Weeks/year or 8,760 Hrs/year

\*\* Maintenance, start-up, and shutdown (MSS) activities

Dated August 5, 2008



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
AIR QUALITY PERMIT



A Permit Is Hereby Issued To  
**Formosa Plastics Corporation, Texas**  
Authorizing the Construction and Operation of  
**Addition of New Gas Turbines**  
Located at **Point Comfort, Calhoun County, Texas**  
Latitude 28° 41' 20" Longitude 96° 32' 50"

Permit: 19166/PSDTX760M9/HAP10

Amendment Date : August 8, 2014

Renewal Date: February 8, 2016

For the Commission

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

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

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### EMISSION STANDARDS, PLANT DESIGN, WORK PRACTICES, AND FUEL SPECIFICATIONS

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit. Compliance with the annual emission limits and operating schedules is based on a rolling 12-month period (i.e., updated monthly) rather than the calendar year. **(12/02)**
2. Fuel fired in the gas turbines and duct burners (Emission Point Number (EPN) 7A through 7E, 7G, 7K and 7L) is limited to pipeline-quality natural gas, hydrogen (H<sub>2</sub>), process gas (defined as natural gas mixed with up to 28 percent H<sub>2</sub>), or tail gas (defined as methane mixed with H<sub>2</sub>). **(8/14)**

Fuel fired in the boiler (EPN 7F) is limited to pipeline-quality natural gas. **(8/14)**

Fuel for boilers with EPNs 7H and 7J is limited to pipeline quality natural gas, hydrogen, fuel gas or blends of these fuels. Use of any other fuel will require prior authorization. **(4/08)**

Use of any other fuel will require modification to this permit. Records of fuel use shall be kept and shall include at least volume, higher Btu heating value, sulfur content, and H<sub>2</sub> content. **(3/10)**

3. The average hourly concentration in parts per million by volume (ppmv) dry corrected to 15 percent oxygen (O<sub>2</sub>) in the stack gases shall not exceed: **(8/14)**

#### Gas Turbines– (No Duct Burners)

Gas Turbine 7G firing process gas, natural gas, or any combination of process gas and natural gas.

NO<sub>x</sub> - 9 and CO - 25 **(7/09)**

#### Gas Turbines (with Duct Burners)

- A. Gas Turbines 7A through 7C firing natural gas, process gas, or any combination of natural gas and process gas, and duct burners firing natural gas, process gas, 100 percent H<sub>2</sub>, tail gas (defined as methane mixed with H<sub>2</sub>), or any combination of these fuels. **(3/10)**

NO<sub>x</sub> - 28 and CO - 25

- B. Gas Turbines 7D through 7E, firing process gas, natural gas, or any combination of process gas and natural gas, and duct burners firing natural gas, process gas, 100 percent H<sub>2</sub>, tail gas (defined as methane mixed with H<sub>2</sub>), or any combination of these fuels. **(3/10)**

NO<sub>x</sub> - 33 and CO - 25

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- C. Gas Turbines 7K and 7L, firing natural gas and duct burners firing natural gas, 100 percent H<sub>2</sub>, tail gas (defined as methane mixed with H<sub>2</sub>), or any combination of these fuels. **(8/14)**

NO<sub>x</sub> – 2 and CO – 25

- D. Measured exhaust NO<sub>x</sub> and CO concentrations from the gas turbine and cogeneration train shall be expressed on a dry basis at 15 percent O<sub>2</sub>. The above limits shall apply except during periods of start-up or shutdown, for turbines 7A through 7E, and 7G not to exceed three hours (see Special Condition No. 24 for turbine 7K and 7L start-up and shutdown durations). In addition, the above limits shall not apply, when it is necessary due to mechanical constraints, to partially load the gas turbine to a level in which emissions will rise above these values. These periods shall not exceed 12 hours. This condition does not preempt the requirements of Title 30 Texas Administrative Code § 101.201 and 101.211 (30 TAC § 101.201 and 101.211) pertaining to emission events and maintenance, start-up, and shutdown activities. **(7/09)**
4. The duct burners (for EPNs 7A, 7B, 7C, 7D, and 7E) shall be limited to a maximum firing rate of no more than 141.8 MMBtu/hr fuel higher heating value (HHV). The duct burners (for EPNs 7K and 7L) shall be limited to a maximum firing rate of no more than 120 MMBtu/hr fuel higher heating value (HHV). **(PSD 8/14)**
5. [RESERVED]
6. The boiler (EPN 7F) shall be limited to a maximum firing rate of 250 MMBtu/hr of fuel (HHV). The NO<sub>x</sub> emissions shall not exceed 0.05 lb/MMBtu heat input (HHV) and CO emissions shall not exceed 0.10 lb/MMBtu heat input (HHV). The above limits shall apply except during periods of start-up or shutdown, not to exceed four hours for a warm start-up, 8 hours for a cold start-up or three hours for a shutdown event. This condition does not preempt the requirements of 30 TAC § 101.201 and 101.211 pertaining to emission events and maintenance, start-up, and shutdown activities. **(12/02)**

Each boiler (EPNs 7H and 7J) shall be limited to a maximum firing rate of 417 MMBtu/hr (HHV.) As measured in the stack exhaust of each boiler, emissions of NO<sub>x</sub> shall not exceed 0.015 lb/MMBtu and emissions of CO shall not exceed 0.037 lb/MMBtu heat input except during start-up, shutdown, or maintenance (not to exceed four hours for a warm start-up, 8 hours for a cold start-up or three hours for a shutdown event), where the emissions of NO<sub>x</sub> and CO shall not exceed the values on the maximum allowable emissions rates table (MAERT). These emissions are based on the higher heating value of the fuel.

Each turbine (EPNs 7K and 7L) shall be limited to a maximum firing rate of 1,052 MMBtu/hr (HHV.) As measured in the stack exhaust of each turbine, emissions of NO<sub>x</sub> shall not exceed the concentration limits listed in Special Condition No. 3 except during start-up, shutdown, or maintenance, where the emissions of NO<sub>x</sub> and CO shall not exceed the values on the maximum allowable emissions rates table (MAERT). See Special Condition No. 24 for turbine 7K and 7L start-up and shutdown durations. These emissions are based on the higher heating value of the fuel. **(8/14)**

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The averaging period for the NO<sub>x</sub> lb/MMBtu emission limit is one block hour and for the CO lb/MMBtu emission it is a three hour block. If either boiler (EPN 7H or 7J) becomes fired solely on pipeline-quality natural gas for longer than one consecutive twelve month period, the NO<sub>x</sub> emission limit shall become 0.01 lb/MMBtu until such time as the boiler is consistently fired on fuel gas blends again. **(4/08)**

7. A copy of this permit shall be kept at the plant site and made immediately available at the request of personnel from the Texas Commission on Environmental Quality (TCEQ), the U.S. Environmental Protection Agency (EPA), or any local air pollution control agency having jurisdiction. In addition, the holder of this permit shall clearly identify all equipment at the property that has the potential of emitting air contaminants. Permitted emission points shall be clearly identified corresponding to the emission point numbering on the MAERT.
8. The facilities operated under this permit shall comply with all applicable requirements of the EPA regulations in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), on Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units and Stationary Gas Turbines Subparts A, Db, and GG. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated. **(PSD 8/14)**

Also, any sources subject to a promulgated or case by case MACT standard shall comply with the applicable sections of 40 CFR Part 63 Subpart A. **(4/08)**

9. Emissions from the turbines, duct burners, and boilers shall not exceed five percent opacity as determined by EPA Reference Method 9, except during periods of start-up or shutdown, not to exceed four hours. This condition does not preempt the requirements of 30 TAC § 101.201 and 101.211 pertaining to emission events and maintenance, start-up, and shutdown activities. **(12/02)**
10. For the Olefins I and II, Ethylene Glycol, Ethylene Dichloride, High Density Polyethylene I and II, Polypropylene I and II, and Linear Low Density Polyethylene Plants all process wastewater shall be collected in a totally enclosed collection system, and vents to the atmosphere shall not be allowed unless otherwise authorized. If wastewater stripping is used, under no circumstances shall overhead gases from wastewater stripping be vented directly to the atmosphere. The non-condensable gases shall be recycled, routed to the flare, or routed to the incineration system. Immediately after stripping, wastewater shall be sampled once per shift and samples shall be composited and analyzed for strippable volatile organic compounds (VOC) with a TCEQ-approved method at least once per week. The specific sample and analytical method must be approved by the TCEQ prior to start of operation of this facility.

If wastewater air strippable VOC exceeds 1,050 pounds per week (lbs/week), corrective action shall be taken and daily strippable VOC analysis shall be conducted until strippable VOC is less than 1,050 lbs/week on a daily basis. Daily air emissions from the Combined Wastewater Treatment Plant (Emission Point No.[EPN] CWTPI) shall be calculated for each day that the wastewater air strippable VOC exceeds 1,050 lbs/week.

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Any exceedance of the 1,050 lbs/week limit shall be reported to the TCEQ Corpus Christi Regional Office within 48 hours of calculated exceedance. This condition does not preempt the requirements of 30 TAC § 101.201 and 101.211 pertaining to emission events and maintenance, start-up, and shutdown activities.

Records shall be maintained of all calculated air strippable VOC emissions (lbs/week), measured air strippable VOC concentration (parts per million by weight), wastewater flow rate (gallons per week), and cumulative total annual emissions (tons per year). These records shall be maintained for a period of two years and shall be made available to representatives of the TCEQ or EPA upon request. **(12/02)**

## STACK SAMPLING REQUIREMENTS

11. The permit holder shall maintain all records of stack sampling performed on the Package Boilers (EPN 7F, 7H, 7J). In the event that additional testing is required for these EPN, the following conditions shall be met: **(8/14)**

The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from each boiler. Sampling for the boiler must be conducted in accordance with appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with EPA Reference Method 9 for opacity (consisting of 30 six-minute readings as provided in 40 CFR § 60.11[b]), Reference Method 10 for the concentration of CO, and Reference Method 7E for the concentrations of NO<sub>x</sub> and O<sub>2</sub>. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operation at his expense.

- A. The TCEQ Corpus Christi Regional Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

The 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) Method for determining boiler heat input during and after sampling.

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, to identify each operating parameter which is significant to maintaining

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emission compliance, and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in this permit condition or any TCEQ or EPA sampling procedures shall be made available to the TCEQ at or prior to the pretest meeting.

The TCEQ Regional Director or the TCEQ Air Permits Division in Austin shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in paragraph B of this condition shall be submitted to the TCEQ Office of Air, Air Permits Division.

Test waivers and alternate or equivalent procedure proposals for 40 CFR Part 60 testing which must have EPA approval shall be submitted to the TCEQ Air Permits Division in Austin. Any equivalent test procedures or any test waivers must be approved by the TCEQ prior to conducting the tests.

- B. Air emissions from the boilers and turbines to be tested for at full load include (but are not limited to): NO<sub>x</sub>, O<sub>2</sub>, CO, and opacity.
- C. The NO<sub>x</sub>, O<sub>2</sub>, and CO from the boilers and turbines shall be sampled at the minimum point in the normal operating range, approximately 80 percent capacity, and at the peak capacity for the atmospheric conditions occurring during the test for EPN 7F and at the maximum firing rate for EPNs 7H and 7J. The NO<sub>x</sub> and CO emissions shall be reported as a function of heat input or exhaust concentration where emission limits are concentration-based. For EPN 7F, this testing will be used to demonstrate continued compliance with Special Condition Nos. 1 through 6. **(8/14)**
- D. Sampling shall occur at the maximum production rate at which the boiler will be operated but no later than 180 days after initial start-up. Additional sampling shall occur as may be required by the TCEQ.
- E. Within 60 days after the completion of the testing and sampling required herein, two copies of the sampling report shall be distributed as follows:

One copy to TCEQ Corpus Christi Regional Office.

One copy to EPA Region 6 Office, Dallas. **(4/08)**

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### CONTINUOUS DEMONSTRATION OF COMPLIANCE (PSD)

12. For turbine units 1 through 3 (7A, B, and C), the holder of this permit shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record ambient temperature, ambient humidity, hours of operation, fuel flow, actual ratio of NO<sub>x</sub> injection steam to fuel flow, and predicted ratio of NO<sub>x</sub> injection steam to fuel flow required by each turbine controller. The flow measurement devices and NO<sub>x</sub> steam controllers shall be accurate to ± five percent and shall have been approved by the Executive Director of the TCEQ prior to the initial compliance demonstration under Special Condition No. 11. **(4/02)**
  - A. For each turbine units 1 through 3 (7A, B, and C), the steam injection rates necessary to comply with the NO<sub>x</sub> concentration limits of Special Condition No. 3 shall be determined by the custom ambient temperature and humidity correction algorithm supplied by the turbine manufacturer, which shall be calibrated by means of the stack sampling required in Special Condition No. 11. The injection rates necessary to maintain the ppmv limits in Special Condition No. 3 shall be maintained during all periods of turbine operation except during start-up or shutdown (defined as turbine operation at less than 40 megawatts of turbine electrical output, not to exceed four hours). The required steam injection rates shall be used to determine continuous compliance with Special Condition No. 3. This condition does not preempt the requirements of 30 TAC § 101.201 and 101.211 pertaining to emission events and maintenance, start-up, and shutdown activities. **(12/02)**
  - B. If one gas turbine is not stack sampled, it shall be operated with steam injection at rates determined to result in compliance by sampling of the identical type turbines also subject to this permit.
13. The holder of this permit shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) on Units 4, 5, and 6 (EPNs 7D, E, and G), the two 417 MMBtu/hr package boilers (EPNs 7H and 7J) and the two combined cycle 1,052 MMBtu/hr (each) turbines (EPNs 7K and 7L) to: **(PSD 8/14)**
  - A. Measure and record the concentrations of NO<sub>x</sub>, CO, and O<sub>2</sub> in each cogeneration unit or boiler exhaust stack. The NO<sub>x</sub> and CO concentrations shall be corrected and reported according to Special Condition No. 3. **(4/08)**
  - B. The CEMS shall comply with the following requirements:
    - (1) The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and data analysis and reporting requirements specified in the applicable Performance Specifications in 40 CFR Part 60, Appendix B. The Performance Specification tests shall be conducted prior to or during the sampling required by Special Condition No. 11, and written copies of the results shall be submitted within 60 days of completion of the tests to the TCEQ Corpus Christi Regional Office and the EPA Region 6 Office in Dallas.

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- (2) The system shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in 40 CFR Part 60, Appendix B. Each gaseous monitor shall be quality-assured at least quarterly using cylinder gas audits (CGA). The CGA method to be used is contained in 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.2.
  - (3) The gaseous monitoring data shall be reduced to hourly average concentrations at least once everyday, using a minimum of four equally-spaced data points from each one-hour period. At least 23 hourly averages shall be generated per day. If three valid data points can be generated during the hourly period in which zero and span is performed, hourly emissions shall be calculated from the CEMS data rather than from an operating parameter calculation.
  - (4) All CGA exceedances greater than  $\pm 15$  percent accuracy and any unscheduled CEMS downtime shall be reported in the report required by Special Condition No. 16 to the TCEQ Corpus Christi Regional Office with the necessary corrective action taken. Supplemental stack concentration measurements may be required at the discretion of the TCEQ Regional Director. **(4/02)**
  - (5) The CEMS shall demonstrate an annual system reliability of at least 90 percent (downtime does not include daily zero and span measurement time or cogeneration unit downtime) or options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Corpus Christi Regional Director. **(5/01)**
14. The holder of this permit shall monitor the fuel fired in each turbine for sulfur and fuel-bound nitrogen as specified in 40 CFR § 60.334(b). Any request for a custom monitoring schedule shall be made in writing and directed to the Executive Director of the TCEQ. Authority for granting such custom schedules remains with the EPA. The TCEQ and the EPA shall approve or disapprove of any request for an alternative monitoring requirement. Any custom schedule approved by EPA pursuant to 40 CFR § 60.334(b) will be recognized as enforceable conditions of this permit, provided that the holder of this permit demonstrates that the conditions of such custom schedule will be adequate to assure continuous compliance with Special Condition Nos. 1 and 3.

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### COMPLIANCE CONDITION

15. The CMS and CEMS required in Special Condition Nos. 12 and 13, the fuel quality monitoring required in Special Condition No. 14, and the fuel use limits and records of Special Condition No. 2 shall constitute the methods for demonstrating continuous compliance with the emission limitations of Special Condition Nos. 1 and 3. **(12/02)**

### RECORDKEEPING REQUIREMENTS

16. The following information shall be made and maintained by the holder of this permit for a period of five years and shall be made available on request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction:
  - A. Records of fuel use shall be kept and shall include at least volume, higher Btu heating value, sulfur content, and hydrogen content pursuant to Special Condition No. 2.
  - B. The results of all testing conducted pursuant to Special Condition Nos. 11 and 24. **(4/08)**
  - C. Records of hours of operation and the firing rate of the turbines, duct burners, and boilers (EPNs 7A through 7L) and the steam-to-fuel ratio for those turbines specified in Special Condition No. 12. **(8/14)**
  - D. Average hourly NO<sub>x</sub>, CO, and O<sub>2</sub> concentrations monitored or converted lb/MMBtu values pursuant to Special Condition No. 13.
  - E. The results of all fuel sampling conducted pursuant to Special Condition No. 14.
  - F. A raw data file of CEMS data including calibration checks and adjustments and maintenance performed on these systems or devices in a permanent form suitable for inspection. **(12/02)**
  - G. Records of the start time and duration of any period when a turbine is exempt from Special Condition No. 3 limitations pursuant to Special Condition No. 3.C. **(5/08)**
  - H. Records of the start time and duration of any period when an engine is operated pursuant to Special Condition No. 22. **(1/06)**

### REPORTING REQUIREMENTS (PSD)

17. The holder of this permit shall submit to the EPA Region 6 Office in Dallas, Texas Commission on Environmental Quality Corpus Christi Regional Office, and the TCEQ Air Permits Division in Austin quarterly reports as described in 40 CFR § 60.7. Such reports are required for each emission unit which is required to be continuously monitored pursuant to Special Condition Nos. 12, 13, and 14. The reporting of excess emissions required by this condition does not relieve the holder of this permit from the requirements of 30 TAC § 101.201 and 101.211 pertaining to emission events and

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maintenance, start-up, and shutdown activities. In addition to the information specified in 40 CFR § 60.7(c), each report shall contain:

- A. Hours of operation of the facility, a summary of the periods of non-complying emissions, CEMS system percent reliability, and CEMS downtimes by cause.
  - B. All CGA exceedances of greater than  $\pm 15$  percent accuracy and the corrective action taken. **(12/02)**
18. For the purposes of reporting pursuant to Special Condition No. 17, excess emissions are defined as follows:
- A. Each one-hour period of turbine operation, except during periods of MSS not to exceed three hours or during part-load operation not to exceed 12 hours, during which the average emissions of NO<sub>x</sub> or CO, as measured and recorded by the CEMS, exceed the emission limitation of Special Condition Nos. 1 or 3.
  - B. Excess annual emissions of NO<sub>x</sub> are defined as a rolling 12-month period during which the 12-month cumulative emissions of NO<sub>x</sub> exceed the annual limits in the table referenced in Special Condition No. 1.
  - C. Excess emissions of sulfur dioxide (SO<sub>2</sub>) are defined as any sample of fuel which is found to contain sulfur which indicates exceedance of the hourly or annual SO<sub>2</sub> limitations required in Special Condition No. 2, based on 100 percent conversion of the sulfur in the fuel to SO<sub>2</sub>.
  - D. Each one-hour period of boiler operation, except during start-up or shutdown not to exceed 4 hours during warm start-up and 8 hours during cold start-up, during which the average emissions of NO<sub>x</sub> or CO, as measured and recorded by the CEMS, exceed the emission limitation of Special Condition Nos. 1 or 5. **(12/02)**

## POST-CONSTRUCTION MONITORING

19. A. 1994 Post-Construction Monitoring

The holder of this permit shall perform continuous ozone monitoring during the 1994 ozone season. This required ozone monitoring shall be in accordance with the procedure specified in C of this special condition. If there are no ozone concentrations greater than "X," (as defined below) the holder of this permit shall not be required to perform any additional ozone monitoring after the 1994 ozone season. **(4/02)**

- B. Subsequent Monitoring

If during the 1994 ozone season, any measured ozone concentration is greater than "X" the holder of this permit shall perform ozone monitoring for the next two years during the ozone season.

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C. Monitoring Procedures

The holder of this permit shall perform all ozone measurements in accordance with the procedure described in 40 CFR Part 50, Appendix D.

D. Recordkeeping

The holder of this permit shall be responsible for maintaining records of the measured ozone concentrations and the values for "X," "Y," and "Z" (as defined below). The holder of this permit shall provide, upon request, ozone monitoring results to the TCEQ. **(4/02)**

E. Monitoring Location

All ozone monitoring shall be conducted at a site to be mutually agreed upon by the permit holder and the TCEQ.

F. Definitions:

"Ozone season" shall mean the months of June, July, August, September, October, and November, collectively.

"X" shall be defined as follows:

$$\text{"X" (in ppm)} = 0.112 + 0.012 \times [0.035 Y + 0.12 Z + 0.085]$$

"Y" = maximum number of Olefin Plant crackers operating on the day of the measurement.

"Z" = maximum number of cogeneration units operating on the day of the measurement.

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ADDITIONAL STACK SAMPLING INITIAL DETERMINATION OF COMPLIANCE - NO. 6 COGEN (5/14) (PSD)

20. The permit holder shall maintain all records of stack sampling performed on the No. 6 Cogeneration Unit (EPN 7G). In the event that additional testing is required for EPN 7G, the following conditions shall be met. **(8/14)**

The holder of this permit shall perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere from EPN 7G. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Reference Method 8 or Reference Methods 6 or 6c for SO<sub>2</sub>; Reference Method 5 for particulate matter equal to or less than 10 microns in diameter (PM<sub>10</sub>), Reference Method 9 for opacity (consisting of 30 six-minute readings as provided in 40 CFR § 60.11[b]); Reference Method 10 for the concentration of CO; Reference Method 25A, modified to exclude methane and ethane, for the concentration of VOC (to measure total carbon as propane); and Reference Method 20 for the concentrations of NO<sub>x</sub> and O<sub>2</sub> or equivalent methods.

Fuel sampling using the methods and procedures of 40 CFR § 60.335(d) may be conducted in lieu of stack sampling for SO<sub>2</sub>. If fuel sampling is used, compliance with 40 CFR Part 60, Subpart GG, SO<sub>2</sub> limits shall be based on 100 percent conversion of the sulfur in the fuel to SO<sub>2</sub>. Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling. The TCEQ Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

- A. The TCEQ Corpus Christi Regional Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

The 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 used to determine turbine loads during and after the sampling period.
- (7) Method to determine ambient concentration of particulate matter.

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- The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports. A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director or the TCEQ Austin Air Permits Division shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Air Permits Division. Test waivers and alternate or equivalent procedure proposals for 40 CFR Part 60 testing which must have EPA approval shall be submitted to the TCEQ Air Permits Division in Austin.
- B. Air emissions from the turbine shall be tested while firing at full load for the ambient conditions at the time of testing. Air emissions to be sampled and analyzed while at full load include (but are not limited to) NO<sub>x</sub>, O<sub>2</sub>, CO, VOC, Formaldehyde, SO<sub>2</sub>, PM<sub>10</sub>, and opacity. (Fuel sampling using the methods and procedures of 40 CFR § 60.335[d] or an approved alternate EPA method may be conducted in lieu of stack sampling for SO<sub>2</sub>).
- C. Air emissions from the No. 6 Cogen shall be tested while firing at minimum load in the normal operating range of the gas turbine (75 percent of base load), corrected to International Standards Organization conditions. Air Emissions to be sampled and analyzed while at minimum load include VOC's and formaldehyde.
- D. Sampling of the turbine shall occur within 60 days after achieving the maximum production rate but no later than 180 days after initial start-up of each unit. Additional sampling shall occur as may be required by the TCEQ or EPA.
- E. Within 60 days after the completion of the testing and sampling required herein, three copies of the sampling reports shall be distributed as follows:
- One copy to the TCEQ Corpus Christi Regional Office.
  - One copy to the TCEQ Austin Office of Permitting and Registration, Air Permits Division.
  - One copy to the EPA Region 6 Office, Dallas. **(9/03)**

### STACK SAMPLING INITIAL DETERMINATION OF COMPLIANCE – EPNs 7K and 7L (8/14)

21. Sampling ports and platforms shall be incorporated into the design of all exhaust stacks for EPNs 7K and 7L according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director.

The permit holder shall perform stack sampling and other testing to establish the actual quantities of air contaminants being emitted into the atmosphere from EPNs 7K and 7L. Unless otherwise specified in this Special Condition (No. 21), the sampling and testing shall be conducted in accordance with the methods and procedures specified in this Special Condition (No. 21). The permit holder is responsible for providing sampling and testing

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facilities and conducting the sampling and testing operations at his expense. The TCEQ Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling.

- A. Air contaminants and diluents from the turbine to be sampled and analyzed include (but are not limited to) NO<sub>x</sub>, CO, VOC, sulfur dioxide (SO<sub>2</sub>), opacity, O<sub>2</sub>, and particulate matter (PM) (filterable and condensable).
- B. The turbine shall be tested at the maximum load for the atmospheric conditions which exist during testing. Turbine load shall be identified in the sampling report.
- C. Fuel sampling using the methods and procedures of 40 CFR § 60.4415 may be conducted in lieu of stack sampling for SO<sub>2</sub>. If fuel sampling is used, compliance with NSPS, Subpart KKKK SO<sub>2</sub> limits shall be based on 100% conversion of the sulfur in the fuel to SO<sub>2</sub>.
- D. Requests to waive testing for any air contaminant specified in this condition shall be submitted to the TCEQ Air Permits Division. Test waivers and alternate or equivalent procedure proposals for NSPS testing which must have EPA approval shall be submitted to the EPA and copied to TCEQ Regional Director.
- E. Sampling as required by this condition shall occur within 60 days after achieving the maximum production but no later than 180 days after initial startup of each unit. Additional sampling shall occur as may be required by the TCEQ or EPA.
- F. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and EPA Test Methods in 40 CFR Part 60, Appendix A.

The TCEQ Corpus Christi Regional Office shall be given notice as soon as testing is scheduled but not less than 30 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) Methods and procedures to be used in sampling, including methods to demonstrate compliance with emission standards found in 40 CFR Part 60, Subpart KKKK.
- (6) Procedure used to determine turbine loads during and after the sampling period.

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The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

Prior to the pretest meeting, 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. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

Two copies of the final sampling report shall be submitted within 60 days after the sampling is completed. Sampling reports shall comply with the attached conditions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the EPA Region 6 Office, Dallas.

One copy to the TCEQ Corpus Christi Regional Office.

### FIREWATER PUMPS

22. This permit authorizes the operation of diesel engine-driven Firewater Pumps (EPNs FPM-02A, B, C, D, and E, and UP-F02A, B, and C) for no more than 100 hours per year each. The sulfur content of diesel fuel burned in these engines shall be no greater than 0.5 weight percent. **(7/09)**

### MAINTENANCE, START-UP, AND SHUTDOWN

23. This permit authorizes start-up and shutdown activities for EPNs 7A to 7L and the following maintenance activities for the specified EPN: compressor cleaning, dry low-NO<sub>x</sub> (DLN) combustor tuning (EPN 7G, 7K and 7L), and boiler tuning (EPNs 7F, 7H and 7J). **(8/14)**

Attachment A identifies the inherently low emitting MSS activities authorized by this permit that may be performed at the plant. 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. **(8/14)**

24. Emissions during MSS activities will be minimized by limiting the duration of operation in planned MSS modes as follows: **(8/14)**

A. EPNs 7K and 7L

- (1) Planned startup of each CT (combustion turbine) is defined as the period that begins when the CT control system detects a flame presence and ends when the CT generator reaches pre-mix mode (as shown on the unit's control system). A planned startup for each CT is limited to three hours per event. At the conclusion of the startup period, the permit holder shall comply with the emission

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concentration limitations in Special Condition No. 3C. and the normal operation emission rates in the MAERT.

- (2) A planned shutdown of each CT is defined as the period that begins when the CT is no longer in premix mode (for the purposes of an intended shutdown) and ends when there is no longer a flame presence the CT. A planned shutdown for each CT is limited to 3 hours per event.
  - (3) Emissions from CT optimization activities, as defined in Attachment B, shall be subject to the hourly emission limits for MSS activities from CTs listed on the MAERT.
25. These authorized emissions are subject to the maximum allowable emission rates indicated on the MAERT. The performance of each maintenance activity and the emissions associated with it shall be recorded and the rolling 12-month emissions shall be updated on a monthly basis. These records shall include at least the following information: **(8/14)**
- A. The physical location at which emissions from the MSS activity occurred, including the emission point number, common name, and any other identifier for the point at which the emissions were released into the atmosphere;
  - B. The type of planned maintenance, startup, or shutdown activity and the reason for the planned activity;
  - C. The common name and the facility identification number of the facilities at which the MSS activity and emissions occurred;
  - D. The date and time of the MSS activity and its duration;
  - E. The estimated quantity of each air contaminant or mixture of air contaminants emitted, with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.
26. Compliance with the emissions limits for planned MSS activities identified in the MAERT attached to this permit shall be demonstrated as follows: **(8/14)**
- A. For ILE planned maintenance activities identified in Attachment A of this permit:
    - (1) The total emissions from all ILE planned maintenance activities shall be considered to be no more than the estimated potential to emit for those activities that are represented in the permit application.
    - (2) The permit holder shall annually confirm the continued validity of the estimated potential to emit represented in the permit application for all ILE planned maintenance activities.
  - B. For CT and SCR planned MSS activities identified in Attachment B of this permit, the permit holder shall do the following.

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- (1) For each pollutant whose emissions are measured with a CEMS that has been certified to measure the pollutant's emissions over the entire range of a planned MSS activity, the permit holder shall measure the emissions of the pollutant during the planned MSS activity using the CEMS.
- (2) For each pollutant whose emissions are not measured with a CEMS in accordance with B.(1) of this condition, determine for each calendar month the emissions of each pollutant listed on the MAERT of this permit from all occurrences of planned MSS activity by calculation. The calculations of the pollutant's hourly and monthly emissions must use data related to the planned MSS activity, identified in turbine operating records, work orders, or equivalent records. The emission rate of the pollutant during the planned MSS activity must be determined either:
  - (a) as represented in the permit application; or
  - (b) as determined with an appropriate method, including but not limited to any of the following methods, provided that the permit holder maintains appropriate records supporting such determination:
    - i. use of emission factor(s), facility-specific parameter(s), and/or engineering knowledge of the facility's operations;
    - ii. use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on a similar facility, and correlation of that data with the activity's or facility's relevant operating parameters;
    - iii. use of emissions testing data collected during a planned MSS activity occurring at or on the facility, and correlation of that data with the facility's or activity's relevant operating parameters, such as electric load, temperature, fuel input, or fuel sulfur content; or
    - iv. use of parametric monitoring system data applicable to the facility.

## AMMONIA REQUIREMENTS

27. The holder of this permit shall continuously monitor or periodically measure NH<sub>3</sub> emissions from EPNs 7H, 7K and 7L when their respective selective catalytic reduction (SCR) system is in operation. The emission measurements shall be used to demonstrate compliance with the MAERT. Use of one of the following methods [A.(1), A.(2), A.(3), B., or C.] is required.
  - A. Continuously monitor or continuously calculate NH<sub>3</sub>. Install, calibrate, maintain, and operate a CEMS to measure and record NH<sub>3</sub> directly or calculate NH<sub>3</sub> through the use of a secondary NO<sub>x</sub> measurement. The continuously measured or continuously calculated NH<sub>3</sub> concentrations shall be corrected in accordance with

## SPECIAL CONDITIONS

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Special Condition No. 5.A. Monitor downtime shall not exceed 5 percent of the time that the CTs were operated over the previous 12-month rolling period. Downtime consists of activities involving calibration, unanticipated power failure, unanticipated equipment malfunction, unplanned maintenance and planned maintenance. The continuous options are as follows.

- (1) Use a CEMS to directly measure and record the concentration of NH<sub>3</sub>. If there are no applicable NH<sub>3</sub> CEMS performance specifications in 40 CFR Part 60, contact the TCEQ Air Permits Division in Austin for requirements to be met.
- (2) Use a second NO<sub>x</sub> CEMS probe located between the duct burners and the SCR, upstream of the stack NO<sub>x</sub> CEMS. In association with the SCR efficiency and NH<sub>3</sub> injection rate, calculate the NH<sub>3</sub> emissions. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR unit.
- (3) Use a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR. Route one of the exhaust streams, in an unconverted state, to one NO<sub>x</sub> CEMS and route the other exhaust stream through a NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to the second NO<sub>x</sub> CEMS. The NH<sub>3</sub> emission concentration is the difference between the converted and unconverted NO<sub>x</sub> CEMS readings.

### B. Periodically measure NH<sub>3</sub> emissions.

- (1) Use a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the 5 to 10 ppm range. The frequency of sorbent or stain tube testing shall be daily for the first 60 days of operation, after which the frequency may be reduced to weekly, if operating procedures have been developed to prevent excess amounts of NH<sub>3</sub> from being introduced in the SCR unit, and operation of the SCR unit has been proven successful with regard to controlling NH<sub>3</sub> slip. Daily sorbent or stain tube testing shall resume when the catalyst is within 30 days of its useful life expectancy.
- (2) If the measured or calculated ammonia slip concentration in B.(1) of this Special Condition exceeds 5 ppm at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis, in addition to the weekly sorbent or stain tube testing. The quarterly testing shall continue until such time as the SCR unit catalyst is replaced; or if the quarterly testing indicates NH<sub>3</sub> slip is 4 ppm or less, the Phenol Nitroprusside/Indophenol/CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 5 ppm NH<sub>3</sub> slip or greater.

### C. Any other method used for measuring NH<sub>3</sub> slip shall require prior approval from the TCEQ Corpus Christi Regional Office.

28. The following requirements apply to piping, valves, pumps, and compressors in ammonia (NH<sub>3</sub>) service:

## SPECIAL CONDITIONS

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- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per shift.
- B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take the following actions:
  - (1) Isolate the leak.
  - (2) Commence repair or replacement of the leaking component.
  - (3) Use a leak collection/containment system to collect or contain the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

- 29. This Prevention of Significant Deterioration (PSD) permit (PSDTX760M9), authorizing project increases of VOC (51.14), CO (566.08 tpy), PM<sub>10</sub> (41.45 tpy), PM<sub>2.5</sub> (41.45 tpy) and NO<sub>x</sub> (96.33 tpy) is conditioned on permit application representations (e.g., PI-1 dated December 21, 2012, its updated submittals of June 5, 2013 and November 26, 2013, and Tables 1F & 2F depicting the contemporaneous period between 4Q 2008 and 4Q 2015).

Date: August 8, 2014

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Permit No. 19166, HAP10 & PSDTX760M9  
Attachment A  
INHERENTLY LOW EMITTING ACTIVITIES

<u>Activity</u>	<u>Emissions</u>				
	<u>VOC</u>	<u>NOx</u>	<u>CO</u>	<u>PM</u>	<u>NH3</u>
Fuel gas venting	x				
Calibration of analytical equipment		x	x		
Catalyst charging/handling				x	
Air intake filter maintenance				x	
Turbine Washing				x	
Maintenance on ammonia tank & equipment					x

Date: August 8, 2014

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Attachment B  
NON-INHERENTLY LOW EMITTING ACTIVITIES

Planned Maintenance Activity	Emissions					
	NO <sub>x</sub>	CO	VOC	PM	NH <sub>3</sub>	SO <sub>2</sub>
CT Maintenance and Tuning <sup>1</sup>	X	X	X	X	X	X
SCR Maintenance, Unit On-Line	X				X	

Notes:

<sup>1</sup>Includes, but is not limited to:

- (i) leak and operability checks (e.g. CT overspeed trip testing, troubleshooting);
- (ii) generator balancing; and
- (iii) tuning activities that occur during seasonal tuning or after the completion of initial construction, a combustor change-out, a major repair, maintenance to a combustor, or other similar circumstances.

Dated: August 8, 2014

Emission Sources - Maximum Allowable Emission Rates

Permit Number 19166, HAP10 and PSDTX760-M9

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.

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7A	88 MW (ISO) Gas Turbine GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, Process Gas, Tail Gas	NOx	119.02	460.00
		NOx (6)	175.00	--
		CO	60.13	232.71
		CO (6)	250.00	--
		VOC	1.75	7.66
		VOC (6)	1.83	--
		PM and PM10	5.71	25.01
		SO2	0.83	3.64
7B	88 MW (ISO) Gas Turbine GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, Process Gas, Tail Gas	NOx	119.02	460.00
		NOx (6)	175.00	--
		CO	60.13	232.71
		CO (6)	250.00	--
		VOC	1.75	7.66
		VOC (6)	1.83	--
		PM and PM10	5.71	25.01
		SO2	0.83	3.64

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7C	88 MW (ISO) Gas Turbine GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, Process Gas, Tail Gas	NOx	119.02	460.00
		NOx (6)	175.00	--
		CO	60.13	232.71
		CO (6)	250.00	--
		VOC	1.75	7.66
		VOC (6)	1.83	--
		PM and PM10	5.71	25.01
		SO2	0.83	3.64
7D	88 MW (ISO) Gas Turbine GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, Process Gas, Tail Gas	NOx	132.02	530.07
		NOx (6)	175.00	--
		CO	59.13	237.09
		CO (6)	250.00	--
		VOC	1.75	7.66
		VOC (6)	1.83	--
		PM and PM10	5.71	25.01
		SO2	0.83	3.64
7E	88 MW (ISO) Gas Turbine GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, Process Gas, Tail Gas	NOx	132.02	530.07
		NOx (6)	175.00	--
		CO	59.13	237.09
		CO (6)	250.00	--
		VOC	1.75	7.66
		VOC (6)	1.83	--
		PM and PM10	5.71	25.01
		SO2	0.83	3.64

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7F	Package Boiler 250 MMBTU/hr	NOx	12.50	54.75
		NOx (6)	22.50	--
		CO	25.00	109.50
		CO (6)	83.00	--
		VOC	0.34	1.51
		VOC (6)	1.40	---
		PM and PM10	1.25	5.48
		SO2	0.10	0.43
7G	83 MW (ISO) Gas Turbine GE Model PG7121 (EA)	NOx	38.00	166.44
		NOx (6)	175.00	--
		CO	62.00	271.56
		CO (6)	250.00	--
		VOC	0.55	2.41
		VOC (6)	0.63	--
		PM and PM10	5.00	21.90
		SO2	0.62	2.69
7H	No.1 Package Boiler 417 MMBTU/hr	NOx	6.25	27.00
		NOx (6)	42.00	--
		CO	15.40	67.00
		CO (6)	153.00	--
		VOC	2.50	10.00
		PM and PM10	3.10	13.70
		SO2	0.70	3.00
		NH3	3.40	9.90

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7J	No. 2 Package Boiler 417 MMBTU/hr	NOx	6.25	27.00
		NOx (6)	42.00	--
		CO	15.40	67.00
		CO (6)	153.00	--
		VOC	2.50	10.00
		PM and PM10	3.10	13.70
		SO2	0.70	3.00
		NH3	3.40	9.90
CWTP1	Combined Wastewater	VOC	12.50	27.30
TTW-15A	Diesel Storage Tank	VOC	0.06	0.01
TTW-15B	Diesel Storage Tank	VOC	0.06	0.01
TTW-15C	Diesel Storage Tank	VOC	0.06	0.01
TTW-15D	Diesel Storage Tank	VOC	0.06	0.01
TTW-15E	Diesel Storage Tank	VOC	0.06	0.01
UT-F02A	Diesel Storage Tank	VOC	0.06	0.01
UT-F02B	Diesel Storage Tank	VOC	0.06	0.01
UT-F02C	Diesel Storage Tank	VOC	0.06	0.01
FPM-02A	Diesel Firewater Pump	NO <sub>x</sub>	8.36	0.33
		CO	3.19	0.12
		VOC	0.18	0.01
		PM	0.66	0.03
		SO <sub>2</sub>	2.06	0.08

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
FPM-02B	Diesel Pump Firewater	NO <sub>x</sub>	8.36	0.33
		CO	3.19	0.12
		VOC	0.18	0.01
		PM	0.66	0.03
		SO <sub>2</sub>	2.06	0.08
FPM-02C	Diesel Pump Firewater	NO <sub>x</sub>	8.36	0.33
		CO	3.19	0.12
		VOC	0.18	0.01
		PM	0.66	0.03
		SO <sub>2</sub>	2.06	0.08
FPM-02D	Diesel Pump Firewater	NO <sub>x</sub>	8.36	0.33
		CO	3.19	0.12
		VOC	0.18	0.01
		PM	0.66	0.03
		SO <sub>2</sub>	2.06	0.08
FPM-02E	Diesel Pump Firewater	NO <sub>x</sub>	8.36	0.33
		CO	3.19	0.12
		VOC	0.18	0.01
		PM	0.66	0.03
		SO <sub>2</sub>	2.06	0.08
UP-F02A	Diesel Pump Firewater	NO <sub>x</sub>	8.68	0.34
		CO	1.87	0.07
		VOC	0.69	0.03
		PM	0.62	0.02
		SO <sub>2</sub>	1.42	0.06

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
UP-Fo2B	Diesel Firewater Pump	NO <sub>x</sub>	8.68	0.34
		CO	1.87	0.07
		VOC	0.69	0.03
		PM	0.62	0.02
		SO <sub>2</sub>	1.42	0.06
UP-Fo2C	Diesel Firewater Pump	NO <sub>x</sub>	8.68	0.34
		CO	1.87	0.07
		VOC	0.69	0.03
		PM	0.62	0.02
		SO <sub>2</sub>	1.42	0.06
XZ-OSo1	Waste Oil Storage Tank	VOC	0.01	0.01
XZ-WSo1	Oil-Water Separation System	VOC	0.11	0.25
PCDIESELFUG	PC Plant Fire Water System Fugitives	VOC	0.04	0.16
EXPDIESELFUG	Expansion Plant Fire Water System Fugitives	VOC	0.06	0.27

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7K	Unit No. 7 (GE 7EA)	<i>Normal Operating Emissions</i>		
		NOx	8.50	
		CO	64.69	
		VOC	5.91	
		SO2	0.80	
		PM	4.66	
		PM10	4.66	
		PM2.5	4.66	
		H2SO4	0.37	
		(NH4)2SO4	0.50	
		NH3	15.74	
		<i>MSS Emissions</i>		
		NOX	175.00	
		CO	220.00	
		VOC	9.00	
		SO2	0.80	
		PM	4.66	
		PM10	4.66	
		PM2.5	4.66	
		H2SO4	0.37	
		(NH4)2SO4	0.50	
		NH3	50.00	

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7K	Unit No. 7 (GE 7EA)	<i>Combined Normal and MSS Emissions</i>		
		NOx		48.16
		CO		283.04
		VOC		25.04
		SO2		3.37
		PM		20.31
		PM10		20.31
		PM2.5		20.31
		H2SO4		1.55
		(NH4)2SO4		2.09
		NH3		68.60

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7L	Unit No. 8 (GE 7EA)	<i>Normal Operating Emissions</i>		
		NOx	8.50	
		CO	64.69	
		VOC	5.91	
		SO2	0.80	
		PM/PM10/PM2.5	4.66	
		H2SO4	0.37	
		(NH4)2SO4	0.50	
		NH3	15.74	
		<i>MSS Emissions</i>		
		NOX	175.00	
		CO	220.00	
		VOC	9.00	
		SO2	0.80	
		PM	4.66	
		PM10	4.66	
		PM2.5	4.66	
		H2SO4	0.37	
		(NH4)2SO4	0.50	
		NH3	50.00	

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		<i>Combined Normal and MSS Emissions</i>		
		NOx		48.16
		CO		283.04
		VOC		25.04
		SO2		3.37
		PM		20.31
		PM10		20.31
		PM2.5		20.31
		H2SO4		1.55
		(NH4)2SO4		2.09
		NH3		68.60
7K-LOVENT	Combustion Turbine 7 Lube Oil Vent	VOC	0.09	0.40
		PM	0.09	0.40
		PM10	0.09	0.40
		PM2.5	0.09	0.40
7L-LOVENT	Combustion Turbine 8 Lube Oil Vent	VOC	0.09	0.40
		PM	0.09	0.40
		PM10	0.09	0.40
		PM2.5	0.09	0.40
7K-NGVENT	Combustion Turbine 7 Natural Gas Vent	VOC	1.75	0.01
7L-NGVENT	Combustion Turbine 8 Natural Gas Vent	VOC	1.75	0.01
NG-FUG	Natural Gas and OL Tail Gas Fugitives (5)	VOC	0.07	0.31

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
NH3-FUG	Ammonia Fugitives	NH3	0.23	1.01
TURB-MSS	ILE Turbine Maintenance Fugitives (5)	NOX	<0.01	<0.01
		CO	<0.01	<0.01
		VOC	0.47	<0.01
		PM	0.58	0.03
		PM10	0.58	0.03
		PM2.5	0.58	0.03
		NH3	75.7	0.76

(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) Exempt Solvent - Those carbon compounds or mixtures of carbon compounds used as solvents which have been excluded from the definition of volatile organic compound.

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

(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) MSS-Maintenance, startup-shutdown emissions

Date: August 8, 2014



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
AIR QUALITY PERMIT



A Permit Is Hereby Issued To  
**Formosa Plastics Corporation, Texas**  
Authorizing the Construction and Operation of  
**EDC Cracking VCM and PVC Processing Facility**  
Located at **Point Comfort, Calhoun County, Texas**  
Latitude 28° 41' 20" Longitude 96° 32' 50"

Permit: 7699 and PSDTX226M7

Revision Date : May 28, 2013

Renewal Date: June 26, 2016

  
For the Commission

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

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

## Special Conditions

Permit Numbers 7699 and PSDTX226M7

1. This permit covers only those emissions 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 only the air contaminants on that table subject to the emission rates limits and other conditions specified in this permit. **(09/01)**
2. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) at a concentration of greater than 1 percent are not authorized by this permit. 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:
  - A. Safety relief valves in VOC service that discharge to the atmosphere and were installed prior to August 11, 1992.
  - B. V-10, V-11, 790-1, 790-2, 455A, 455B, 455C, 455D, 455E, 455F, 704-C1, and 704 C2 (listed in the company letter dated December 15, 1996).
  - C. RV C302B1, RV-302B2, and RV-E301C.
  - D. RV-508B, RV-503B, RV-502C, RV-C401G1, PSV-1169-1, PSV-1169-2, PSV 2015 1, PSV-2015-2, PSV-2029-1, PSV-2029-2, PSV-2039, PSV-1155, PSV 2057-1, PSV 2057 2, PSV-1598-1, PSV-1598-2, PSV-1124-1, PSV1124-2, and PSV-1125 (listed in the amendment application dated November 1998).
  - E. RM-T763E, RM-T763F, RM-T769A, RM-T769B, RV-E270D, RV-E271D, RV E271D2, RV R290D, RV-T768, RV-V207D, RV-V810F, RV-V810G, RV V810H, RV 810-I, RV 810J, RV-810K, and RV-810L (listed in the amendment application dated July 1999).
  - F. RV-701G, RV-701H, RV-7041-1, and RV-7041-2 (listed in the amendment application dated December 29, 2000).
  - G. RV-E502C, RV-505C, RV-520C, RV-SR03E1-17, RV-SR03F1-16, RV-461G, RV 462G, RV-V422, RV-E321C, RV-E321D, RV-C304B, RV-E320B, and PSV 1134 (listed in the amendment application dated March 28, 2003).
  - H. RV-780-A, RV-780-B, RV-780-C, RV-702C-1, RV-702C-2, RV-702C-3, RV 630D 1, RV-630D-2, RV-C402H-1, RV-C402H-2, RV-R401H-1, RV-R401H-2, RV-C401H-1, RV-C401H-2, RV-E401H1-A, RV-E401H1-B, RV-E401H2-A, RV E401H2-B, RV V422H-1, RV-V422H-2, RV-V403B1. **(06/06)**
3. The ethylene dichloride (EDC) cracking, vinyl chloride monomer (VCM), and polyvinylchloride (PVC) processing facilities are authorized to manufacture no more than 900,000 short tpy of PVC. **(06/06)**

### **VOC Residual Control**

4. The residual vinyl chloride monomer (RVCM) concentration in the stripper slurry is limited to 75 ppmw on a daily average and 20 ppmw on a rolling 12-month average. The annual averages shall be computed by adding the daily averages and dividing by the number of production days.

A quarterly screening of each PVC product measured at the stripper bottoms and dryer outlet will be tested for methanol to assure compliance with the maximum allowable emissions rate table and this standard. The permit holder shall develop a test method for methanol and submit it to the Texas Commission on Environmental Quality (TCEQ) for approval prior to December 31, 2006. The test method shall be approved and the quarterly screening commence prior to startup of the new H<sub>2</sub>-furnace or December 31, 2007, whichever occurs first. The non-VCM VOC residual differential across the dryer as determined by the sample method shall not exceed 200 ppmw on a daily average and 50 ppmw on a rolling 12-month average.

The rolling 12-month average shall be calculated for the stripper slurry RVCM and total VOC concentration on a monthly basis in accordance with Title 40 Code of Federal Regulation Part 61 (40 CFR Part 61), Subpart F or TCEQ-approved procedure. Records of the sample results for each resin grade and rolling 12-month average RVCM and total VOC concentrations shall be maintained. **(06/06)**

### **Cracking Furnaces**

5. The permittee shall burn only natural gas as a fuel in combustion sources designated as Emission Point Nos. (EPNs) 001, 002, 003, 415, 416, 417, 418, 419, and 420. These combustion sources shall be equipped with oxygen (O<sub>2</sub>) monitors. **(06/06)**
6. The EDC Cracker No. 7 (EPN 419) shall be equipped with Low-Nitrogen Oxides (NO<sub>x</sub>) burners emitting no more than 0.06 pound NO<sub>x</sub> per million British thermal units (MMBtu) on an hourly average. EDC Cracker No. 8 (EPN 420) shall emit no more than 0.03 pound NO<sub>x</sub> per MMBtu on an hourly average. **(06/06)**

### **Particulate Control**

7. There shall be no visible emissions exceeding 30 seconds in any six-minute period as determined using U.S. Environmental Protection Agency (EPA) Test Method 22 from any vent from the facilities authorized by this permit. **(06/06)**
8. The baghouses covered by this permit shall not operate unless control devices and associated equipment are maintained in good working order and operating. Each vent shall be inspected for visible emissions once per day following the procedure in EPA Test Method 22 with a one minute observation period. If there are any visible emissions from a bag house or cyclone, a full (six-minute) EPA Test Method 22 observation shall be completed. The results of the inspections shall be recorded. **(06/06)**

9. A weekly inspection of the bag houses shall be performed which includes: inspection for leaks, pulse-air check, and exhaust inspection for emissions. Records shall be maintained of all inspections and maintenance performed. Inspections are not required when weather conditions prohibit safe access to bag house but will be documented on weekly checklist. Detailed maintenance inspections will be performed every six months or whenever visual checks indicate that maintenance may be necessary. Records shall be maintained of all inspections and maintenance performed. **(06/06)**

### **Process Vent Controls**

10. The incinerators (EPNs 006A/006B/006C and 006D/006E) shall operate with no less than 99.975 percent efficiency in disposing of ethylene dichloride (EDC) and 99.95 percent efficiency in disposing of other carbon compounds captured by the collection system on an hourly average. **(06/06)**
11. The six minute average temperature and six minute average oxygen concentration in the incinerators shall be at greater than the respective hourly average maintained during satisfactory stack testing to be completed no later than October 15, 2006, as required by Special Condition No. 10. The interim six minute average firebox exit temperature in the incinerators shall be a minimum 1668° F until the completion of the stack test. **(08/06)**
  - A. The incinerator fire box exit temperature shall be continuously monitored and recorded when waste gas is directed to the incinerator. The temperature measurement device shall reduce the temperature readings to an averaging period of 6 minutes or less and record it at that frequency. The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of 0.75 percent of the temperature being measured expressed in degrees Celsius or  $\pm 2.5^{\circ}\text{C}$ .
  - B. The oxygen analyzer shall continuously monitor and record oxygen concentration when waste gas is directed to the oxidizer. It shall reduce the oxygen readings to an averaging period of 6 minutes or less and record it at that frequency. Upon start-up of the new H Furnace or December 31, 2007, whichever occurs first, the oxygen analyzer shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified Performance Specification No. 3, 40 CFR Part 60, Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days. A weekly calibration shall be performed prior to that date.

The analyzer shall be quality-assured at least semiannually using cylinder gas audits (CGAs) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.2, with the following exception: a relative accuracy test audit is not required once every four quarters (i.e., two successive semiannual CGAs may be conducted). An equivalent quality assurance method approved by the TCEQ may also be used. Successive semiannual audits shall occur no closer than four months. Necessary corrective action shall be taken for all CGA exceedances of  $\pm 15$  percent accuracy and any

continuous emissions monitoring system downtime in excess of 5 percent of the incinerator operating time. These occurrences and corrective actions shall be reported to the appropriate TCEQ Regional Director on a quarterly basis. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.

- C. Quality assured (or valid) data must be generated when waste gas is directed to the incinerator except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the incinerator operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. **(06/06)**
12. The pH of incinerator scrubbing solutions and the solution flow rates shall be maintained at levels not less than those maintained during the required stack testing. The pH shall be continuously analyzed and recorded at least once every 6 minutes. Each monitoring device shall be cleaned and calibrated every two weeks using hydraulic, chemical, or mechanical cleaning. The pH meter shall be accurate to within + 0.5 pH unit. The liquid flow rate shall be monitored and recorded at least once an hour. The flow 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 span or 5 percent of the design value.

Quality assured (or valid) data must be generated when waste gas is routed to the scrubber except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in hours) that the waste gas is routed to the scrubber over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. **(06/06)**

13. The following requirements apply to capture systems for each incinerator/scrubber system designated as EPNs 006A, B, C and 006D, E. **(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.

### **Cooling Towers**

14. The cooling tower inlet and outlet water shall be sampled twice per day utilizing a closed-loop or closed-type sampling apparatus to eliminate loss of VOC from the samples. All inlet sampling points shall be downstream of the last return point of process cooling water to the cooling tower inlet stream. Testing shall be performed in the laboratory for EDC, VCM, and VOC, and for each contaminant a differential content shall be determined (inlet minus outlet) in parts per billion by weight (ppbw). A search for leaks shall be initiated when this differential exceeds 5 ppbw for EDC, 5 ppbw for VCM, or 30 ppbw for VOC as determined by two consecutive sets of samples. Records of these test results and actions taken shall be kept and maintained in accordance with General Condition No. 7.

The EDC content of inlet water to the cooling towers shall be continuously monitored with either a gas chromatograph or mass spectrophotometer and pH probes shall be installed downstream of critical heat exchangers. These systems shall be operational upon start-up of new Oxychlorination Reactor VR-201D. A search shall be initiated should either of these measures indicate a leak of EDC into the cooling water. Records of these readings and actions taken as a result of high readings shall be kept and maintained in accordance with General Condition No. 7. **(08/99)**

### **Sampling of Emission Points**

15. The permit holder shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere PVC Dryer PD-501H (EPN 313H), Incinerator/Scrubber Systems (EPNs 006A or 006B, 006C, 006D, and 006E), and EDC Cracker No. 8 (EPN 420) and demonstrate compliance with Special Condition Nos. 1, 6, and 10. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and the EPA Reference Methods.

Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for 40 CFR Part 60 testing which must have EPA approval shall be submitted to the TCEQ Office of Compliance and Enforcement (OCE), Compliance Support Division.

- A. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:
- (1) Proposed date for pretest meeting.
  - (2) Date sampling will occur.
  - (3) Name of firm conducting sampling.
  - (4) Type of sampling equipment to be used.
  - (5) Method or procedure to be used in sampling.
  - (6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.
  - (7) Procedure/parameters to be used to determine worst-case emissions during the sampling period.

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

- B. Air contaminants emitted from PVC Dryer PD-501H (EPN 313H) to be tested for include (but are not limited to) VOC, VCM, and particulate matter (PM).  
Air contaminants emitted from the Incinerator/Scrubber Systems (EPNs 006A or 006B, 006C, 006D, and 006E) to be tested for include (but are not limited to) VOC, hydrogen chloride, and chlorine.  
Air contaminants emitted from EDC Cracker No. 8 to be tested for include (but are not limited to) NO<sub>x</sub> and CO.
- C. Sampling of EDC Cracker No. 8 shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial start-up of the facility. Stack sampling of the incinerator and scrubbers and PVC dryer shall be repeated at five-year intervals in accordance with parts A, B, and D of this condition. The PVC Dryer I (EPN 313I) may be sampled in lieu of PVC Dryer PD-501H (EPN 313H) at any five-year interval. Air contaminants emitted from the dryers may be limited to VCM and PM. Sampling shall also occur at such other times as may be required by the TCEQ Executive Director and requests for additional time to perform sampling shall be submitted to the appropriate TCEQ Regional Office.
- D. The facility being sampled shall operate at maximum production/firing rates during stack emission testing. These conditions/parameters and any other primary

operating parameters that affect the emission rate shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if the production/firing rate exceeds that maintained during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the region.

- E. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled "Chapter 14, Contents of Sampling Reports" of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TCEQ Regional Office. **(06/06)**

16. The strippable VOC associated with VCM wastewater shall be sampled immediately after the stripper and analyzed at least weekly with an approved air stripping system or equivalent. If the sampling results show emissions above the maximum allowable emission rate, the cause shall be investigated and corrected and the wastewater shall be resampled within 24 hours. Every reasonable effort shall be made to repair the faulty component within 15 days after the exceedance has been noted.

The results of the monitoring and corrective actions shall be recorded, and such records shall be maintained for a period of two years. The permit holder may reduce this sampling frequency to monthly after ten samples have been taken and the required operating conditions for the wastewater stripper have been established to ensure the wastewater emissions are controlled.

### **Fugitive Emission Monitoring**

17. Piping, Valves, Connectors, Pumps, Agitators, and Compressors - 28VHP **(11/12)**

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

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

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

- (1) Piping and instrumentation diagram (PID);
  - (2) A written or electronic database or electronic file;
  - (3) Color coding;
  - (4) A form of weatherproof identification; or
  - (5) Designation of exempted process unit boundaries.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in subparagraph 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 an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven

pumps) may be used to satisfy the requirements of this condition and need not be monitored.

- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump, 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 shutdown as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown 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 through G of this condition.
- L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable 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. With respect to Special Condition 17, new and reworked is meant to apply to major changes in piping. It is not intended to apply to minor activities including but not limited to: installation/replacement of small number of valves and flanges; minor repairs; gasket replacement; repair/replacement of small sections of piping, etc. Also, "process pipelines" does not apply to underground process sewer lines, cooling tower water, fire water, etc. Additionally, the requirement for new and reworked buried connectors to be welded will 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.
18. In lieu of the 2000 ppmv VOC limit in Paragraph H of Special Condition 17, damaged or leaking pump, compressor, and agitator seals found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained. **(02/11)**
19. 28CNTQ

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 through J of Special Condition No. 17.

- A. In lieu of the monitoring frequency specified above, 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.

- B. 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. **(06/06)**

20. This condition applies to piping, valves, pumps, and compressors in hydrochloric acid and chlorine service
- A. Audio, olfactory, and visual checks for hydrochloric acid and chlorine leaks within the operating area shall be made once a shift.
  - B. Immediately, but no later than two hours upon detection of a leak, plant personnel shall take the following actions:
    - (1) Isolate the leak, if possible, or
    - (2) Commence repair or replacement of the leaking component, or
    - (3) Use a leak collection containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

The date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. **(06/06)**

#### **Ambient Monitoring — EDC and VCM**

21. The holder of this permit, at the permittee's expense, shall continue community ambient air sampling for EDC and VCM as directed by letters dated March 18, June 10, July 8, and September 9, 1994, from the TCEQ to Formosa and any subsequent modifications to those letters. In addition to other required distribution, a copy of the sampling results shall be provided to the TCEQ Office of Air, Air Permits Division on a quarterly basis for four consecutive quarters. If it is determined that a condition of air pollution exists due to VCM emissions, further controls may be required. **(08/99)**
22. The location of one of the community ambient monitors referenced above shall be changed such that the monitoring results will be representative of the ground level concentrations at the nearest residence. Placement of the monitor, sampling frequency, and other details shall be in accordance with the letter dated August 13, 1999, from the TCEQ to Formosa and any subsequent modifications to that letter. Additional controls may be required if the annual monitoring result for EDC at this location exceeds 4.0 micrograms per cubic meter. This requirement will be in effect whether the new monitoring location is inside or outside the Formosa property boundary. **(08/99)**
23. In the event that residential development occurs along Highway 35 southwest of the Formosa plant property line, an ambient monitor for EDC and VCM shall be located in that vicinity. Exact placement and type of monitor, and any additional compounds to be tested for, shall be agreed upon between the permit holder and the Toxicology and Risk Assessment Section of the TCEQ. Operation of the new monitor shall begin no later than 90 days after the need for the new monitor is determined. **(08/99)**

24. An ambient monitoring system for EDC shall be installed inside the Vinyl Plant with an alarmed trigger level of 25 ppm, similar to the existing monitoring system for VCM. This system shall be operational upon start-up of new Oxychlorination Reactor VR-201D. **(08/99)**

### **Maintenance Practices**

25. The permit holder shall submit a permit amendment application to the TCEQ, as required by the schedule in 30 TAC 101.122(h), to add the emissions from all planned maintenance, start-up, and shutdown activities including vessel and equipment openings at these facilities to the maximum allowable emissions rate table. **(06/07)**
26. 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, or the quantity of EDC shall be no greater than 27 pounds, whichever is less, prior to opening any equipment directly to the atmosphere. This condition shall apply to all equipment larger than 1,250 gallons containing at least 10 percent EDC by weight with the exception of storage tanks in EDC service having capacities greater than 56,000 gallons. These storage tanks will be required to meet the 5 percent requirement. **(08/99)**
27. EDC furnace decoking emissions shall be routed to a water scrubber for particulate control. Proper operation of the scrubber shall be verified prior to the decoking evolution. Records shall be maintained documenting the operation check and the emissions from each decoke.

Within 60 days of the completion of changes associated with the amendment, PI-1 dated July 29, 2005, the holder of this permit shall submit to the TCEQ Corpus Christi Regional Office documentation which demonstrates how compliance with all the conditions of this permit will be achieved. This documentation shall consist of a statement explaining how each requirement in a condition will be met. It shall include samples of all record sheets required to be maintained by permit conditions and applicable NESHAPS and NSPS subparts and a listing of all testing required with anticipated test dates. **(06/06)**

### **VCM Loading**

28. All railcars loaded with VCM shall be pressure rated and have a current certification in accordance with the U.S. Department of Transportation (DOT) pressure test requirements of 49 CFR § 173.31 for railcars. The permit holder shall keep records of the identification number of each railcar, the pressure rating, the date the railcar last passed the DOT pressure test, and the date of the next required pressure test. **(01/04)**
29. A hard pipe connection shall be used between the railcar and loading rack during VCM loading operations. **(01/04)**

All railcars shall be vapor-balanced to the VCM pressure vessels during loading operations. **(01/04)**

**Maintenance, Startup, and Shutdown (MSS)**

30. 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	006 A, B, C, D, E
All facilities*	Degas facilities to atmosphere after control	007-1-MSSPVC, 007-1-MSSVCM
All facilities*	Fill and/or vent to control during startup	006 A, B, C, D, E
Baghouses/bag filters	Repair, replace, maintain	007-1-MSSPVC, 007-1-MSSVCM
Vacuum trucks	Load and transport liquid to support MSS on permanent facilities	007-1-MSSPVC, 007-1-MSSVCM
Instruments/analyzers	Maintenance and calibrations	007-1-MSSPVC, 007-1-MSSVCM
All facilities	Sampling and sight glass cleaning	007-1-MSSPVC, 007-1-MSSVCM

\* - 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 38. 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)**

31. This permit authorizes the emissions from the facilities identified in Special Condition 30 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)**

32. 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 32.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, hydroblasting, 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 33. 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.

Except as noted in Attachment A, all instances of venting directly to atmosphere per Special Condition 32.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)**

33. 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. **(5/13)**
- (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 8.2.1.1.2 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)**

34. 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 33.
    - (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)**
35. 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 33.
  - (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 D.(1) of this condition;
    - (b) Records shall be maintained of 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 33.
  - (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)**
36. Bag filter maintenance shall be performed in a manner to minimize particulate matter emissions and minimize down time. **(11/12)**
37. 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)**
38. 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. The plant Incinerator/Scrubber system (EPNs: 006 A, B, C, D, E) shall operate as specified in Special Conditions 10 through 13. **(11/12)**
39. With the exception of the MAERT emission limits, the MSS permit conditions become effective 180 days after this permit amendment, PI-1 dated January 3, 2008, has been approved. During the 180 day period, the permit holder shall maintain records of MSS activities. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded. **(11/12)**

Dated: May 28, 2013

**Permit 7699 and PSDTX226M7**

Attachment A

Inherently Low Emitting Activities

Activity	Emissions
	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

Dated: November 30, 2012

**Permit 7699 and PSDTX226M7**

Attachment B

Routine Maintenance Activities

Facilities	Description/Emission Activities	EPN
Strainers	Vent to atmosphere	007-1-MSSVCM
Ejector-Mixer	Vent to atmosphere	007-1-MSSVCM
Separator	Vent to atmosphere	007-1-MSSVCM
Instruments	Vent to atmosphere	007-1-MSSVCM
Loading/Unloading	Vent to atmosphere	007-1-MSSVCM
Vacuum Trucks	Vent to atmosphere	007-1-MSSVCM
Pumps	Vent to atmosphere	007-1-MSSVCM
Baghouses	Vent to atmosphere	007-1-MSSVCM
Propylene Refrigeration	Vent to atmosphere	007-1-MSSVCM
Filter Press	Vent to atmosphere	007-1-MSSVCM
Decoking	Vent to atmosphere	007-1-MSSVCM
Waste Drums	Vent to atmosphere	007-1-MSSVCM
Roll-off Boxes	Vent to atmosphere	007-1-MSSVCM
Piping degassing	Vent to atmosphere	007-1-MSSVCM
Exchangers	Vent to atmosphere	007-1-MSSVCM
Compressors/Blowers	Vent to atmosphere	007-1-MSSPVC
Strainers	Vent to atmosphere	007-1-MSSPVC
Exchangers	Vent to atmosphere	007-1-MSSPVC

Facilities	Description/Emission Activities	EPN
Pumps	Vent to atmosphere	007-1-MSSPVC
Separators	Vent to atmosphere	007-1-MSSPVC
Filters	Vent to atmosphere	007-1-MSSPVC
Small Vessels	Vent to atmosphere	007-1-MSSPVC
Vacuum Trucks	Vent to atmosphere	007-1-MSSPVC
Piping	Vent to atmosphere	007-1-MSSPVC
Baghouses	Vent to atmosphere	007-1-MSSPVC
Instruments	Vent to atmosphere	007-1-MSSPVC
Methanol Equipment	Vent to atmosphere	007-1-MSSPVC
Methylene Chloride Equipment	Vent to atmosphere	007-1-MSSPVC
Ethylene Glycol Equipment	Vent to atmosphere	007-1-MSSPVC
Formaldehyde Equipment	Vent to atmosphere	007-1-MSSPVC

Dated: November 30, 2012

**Permit 7699 and PSDTX226M7**

Attachment C

Significant MSS Activity Summary

The following activities are subject to the full recordkeeping requirements specified by Special Condition 33.

Reactors

Columns

Frac tanks

Pressure Vessels

Storage Tanks

Hydroblasting

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

Date: November 30, 2012

Emission Sources - Maximum Allowable Emission Rates

Permit Number 7699 and PSDTX266M7

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)
1	Boiler No. 1	VOC	0.23	0.07
		NO <sub>x</sub>	8.48	2.57
		SO <sub>2</sub>	0.05	0.02
		PM	0.76	0.23
		CO	1.29	0.39
2	Boiler No. 2	VOC	0.23	0.07
		NO <sub>x</sub>	8.48	2.57
		SO <sub>2</sub>	0.05	0.02
		PM	0.76	0.23
		CO	1.29	0.39
3	Boiler No. 3	VOC	0.23	0.07
		NO <sub>x</sub>	8.48	2.57
		SO <sub>2</sub>	0.05	0.02
		PM	0.76	0.23
		CO	1.29	0.39

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
006A, B, C	Incinerator/Scrubbers (6) (12)	VOC	0.32	1.41
		NO <sub>x</sub>	4.24	18.60
		PM	1.24	5.43
		CO	0.89	3.88
		Cl <sub>2</sub>	2.01	8.80
		HCl	1.03	4.51
		VCM	1.43	6.26
		EDC	(8)	(8)
006D, E	Incinerator/Scrubbers (7) (12)	VOC	0.53	2.02
		NO <sub>x</sub>	3.08	13.05
		SO <sub>2</sub>	0.01	0.02
		PM	0.70	3.07
		CO	7.66	32.98
		Cl <sub>2</sub>	2.90	12.46
		HCl	2.17	9.32
		VCM	0.15	0.54
		EDC	(8)	(8)
007-1	Fugitives (5)	VOC	0.29	1.26
		Cl <sub>2</sub>	0.01	0.05
		HCl	0.31	1.37
		VCM	1.79	7.85
		EDC	1.34	5.86
209A	Catalyst Hoppers Cyclone Separator	PM	0.07	0.03

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
	Bag Filters			
209D	Catalyst Hoppers Cyclone Separator Bag Filters	PM	0.07	0.03
312	Silos (9)	PM	0.81	3.55
313A-N 313A-S	PVC A Dryer Stacks (11)	VOC	2.06	-
		PM	1.07	-
		VCM	1.83	-
313B-N 313B-S	PVC B Dryer Stacks (11)	VOC	2.06	-
		PM	1.07	-
		VCM	1.83	-
313C-N 313C-S	PVC C Dryer Stacks (11)	VOC	2.06	-
		PM	1.07	-
		VCM	1.83	-
313D-N 313D-S	PVC D Dryer Stacks (11)	VOC	2.06	-
		PM	1.07	-
		VCM	1.83	-
313E-N 313E-S	PVC E Dryer Stacks (11)	VOC	2.06	-
		PM	1.07	-
		VCM	1.83	-
313F-N 313F-S	PVC F Dryer Stacks (11)	VOC	2.06	-
		PM	1.07	-
		VCM	1.83	-
313G-N	PVC G Dryer Stacks	VOC	2.06	-

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
313G-S	(11)	PM	1.07	-
		VCM	1.83	-
313H	PVC Dryer H	VOC	2.06	-
		PM	0.98	-
		VCM	1.83	-
313I	PVC Dryer I	VOC	8.87	-
		PM	0.98	-
		VCM	1.83	-
313A through 313I	PVC Dryers A – I (10)	VOC	-	35.03
		PM	-	35.48
		VCM	-	16.80
415	EDC Cracker No. 3	VOC	0.17	0.71
		NO <sub>x</sub>	3.30	14.45
		SO <sub>2</sub>	0.03	0.14
		PM	0.57	2.35
		CO	1.03	4.23
416	EDC Cracker No. 4 and Hot Oil Heater	VOC	0.08	0.33
		NO <sub>x</sub>	3.09	13.53
		SO <sub>2</sub>	0.01	0.04
		PM	0.11	0.48
		CO	0.86	3.77

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
417	EDC Cracker No. 5	VOC	0.15	0.67
		NO <sub>x</sub>	3.30	14.45
		SO <sub>2</sub>	0.03	0.14
		PM	0.75	3.30
		CO	1.93	8.43
418	EDC Cracker No. 6	VOC	0.15	0.67
		NO <sub>x</sub>	3.30	14.45
		SO <sub>2</sub>	0.03	0.14
		PM	0.75	3.30
		CO	1.93	8.43
419	EDC Cracker No. 7	VOC	0.36	1.59
		NO <sub>x</sub>	4.06	17.80
		SO <sub>2</sub>	0.04	0.17
		PM	0.50	2.20
		CO	2.37	10.38
420	EDC Cracker No. 8	VOC	0.53	2.34
		NO <sub>x</sub>	2.97	13.00
		SO <sub>2</sub>	0.06	0.25
		PM	0.74	3.23
		CO	4.95	21.66
801 through 803	PVC Compounding	VOC	5.80	1.70
		PM	2.28	10.00

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
999	Cooling Tower (5)	VOC	2.06	9.03
		VCM	0.34	1.51
		EDC	0.34	1.51
BF-901A	BT-901A Silo Bagfilter	PM	0.03	0.12
BF-901B	BT-901B Silo Bagfilter	PM	0.03	0.12
CF-803A	CT-810A Silo Bagfilter	PM	0.09	0.41
CF-803B	CT-810B Silo Bagfilter	PM	0.09	0.41
CF-803C	CT-810C Silo Bagfilter	PM	0.09	0.41
CF-803D	CT-810D Silo Bagfilter	PM	0.09	0.41
CF-805A	CT-818A Silo Bagfilter	PM	0.11	0.41
CF-805C	CT-818C Silo Bagfilter	PM	0.11	0.41
CF-812	Oversize PVC Bagfilter	PM	0.30	0.51
CF-813A	CT-817A Silo Bagfilter	PM	0.09	0.41
CF-813B	CT-817B Silo Bagfilter	PM	0.09	0.41
CF-813C	CT-817C Silo Bagfilter	PM	0.09	0.41
CF-813D	CT-817D Silo Bagfilter	PM	0.09	0.41
CS-002	Offgrade PVC Dryer Separator	PM	0.72	1.80
CT-811A	Calcium Carbonate Tank	PM	0.01	0.01
CT-811B	Calcium Carbonate Tank	PM	0.01	0.01
CT-811C	Calcium Carbonate Tank	PM	0.01	0.01
CT-811D	Calcium Carbonate Tank	PM	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)
CT-814A	Titanium Dioxide Tank	PM	0.01	0.01
CT-814B	Titanium Dioxide Tank	PM	0.01	0.01
CT-814C	Titanium Dioxide Tank	PM	0.01	0.01
CT-814D	Titanium Dioxide Tank	PM	0.01	0.01
CT-819A	Calcium Carbonate/ Titanium Dioxide Tank	PM	0.01	0.01
CT-819B	Calcium Carbonate/ Titanium Dioxide Tank	PM	0.01	0.01
PF582	Vacuum System Bag Filter	PM	0.17	0.71
PF-601I	PT-601I Silo Bagfilter	PM	0.03	0.12
PF-601J	PT-601J Silo Bagfilter	PM	0.03	0.12
PF-606A	PT-606A Silo Bagfilter	PM	0.03	0.12
PF-606B	PT-606B Silo Bagfilter	PM	0.03	0.12
PF-606C	PT-606C Silo Bagfilter	PM	0.03	0.12
PF-607A	PT-607A Silo Bagfilter	PM	0.03	0.12
PF-607B	PT-607B Silo Bagfilter	PM	0.03	0.12
PF-607C	PT-607C Silo Bagfilter	PM	0.03	0.12
PF-607D	PT-607D Silo Bagfilter	PM	0.03	0.12
PF-608A	PT-607A/B Rotary Valve Bagfilter	PM	0.03	0.08
PF-608B	PT-607C/D Rotary Valve Bagfilter	PM	0.03	0.08
PT-421	Organic Peroxide	VOC	0.01	0.01

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
	Tank			
PT-422	Organic Peroxide Tank	VOC	0.01	0.01
PT-423	Organic Peroxide Tank	VOC	0.01	0.01
PT-424	Organic Peroxide Tank	VOC	0.01	0.01
PT-425	Organic Peroxide Tank	VOC	0.01	0.01
PT-426	Organic Peroxide Tank	VOC	0.01	0.01
VC-641A	Decoke Scrubber	PM	14.92	0.48
		CO	1.66	0.03
VC-641G	Decoke Scrubber	PM	22.3	0.09
		CO	2.18	0.01
VC-641D	Decoke Scrubber	PM	19.69	0.05
		CO	4.20	0.18
VC-641H	Decoke Scrubber	PM	22.30	0.09
		CO	4.20	0.18
VR-290	Catoxid Reactor Vent	VOC	0.08	0.01
		NO <sub>x</sub>	3.34	0.13
		SO <sub>2</sub>	0.01	0.01
		PM	2.50	0.10
		CO	79.00	3.16
VT-611A	Groundwater Tank	VOC	0.01	0.01

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
VT-680	Wastewater Tank	VOC	0.10	0.14
		VCM	0.11	0.14
		EDC	0.08	0.12
VT(7)68	Kerosene Tank	VOC	0.74	0.01
VW-C11	Cooling Tower (5)	VCM	1.60	7.02
		EDC	0.40	1.75
<b>Maintenance, Startup, and Shutdown (MSS)</b>				
007-1-MSSPVC	Emissions to Atmosphere	VOC	502.10	2.80
		PM	16.70	0.31
007-1-MSSVCM	Emissions to Atmosphere	VOC	1972.00	14.70
		PM	5.50	0.21
		PM <sub>10</sub>	2.59	0.10
		PM <sub>2.5</sub>	0.39	0.02
		HCl	90.00	1.31

Emission Sources - Maximum Allowable Emission Rates

- (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  
VCM -vinyl chloride monomer  
EDC- ethylene dichloride
- (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) Emission Point Nos. (EPN) 006A, B, and C represents three separate emissions points. Emissions shown are the maximum allowable rates for the three incinerator/scrubber trains combined.
- (7) The EPNs 006D and E represent two separate emissions points. Emissions shown are the maximum allowable rates for the two incinerator/scrubber trains combined.
- (8) Total EDC emissions for Incinerator/Scrubber Systems 006A through 006E (EPNs 006A, B, C, D, and E) are 0.713 pounds per hour and 3.032 tons per year.
- (9) Combined emissions rate for the following product storage silos (1,000-ton capacity) and loading silos (100 ton capacity): PT-601A through H, PT-602A through E, PT-602G, PT-603, CT-818B, and CT-818D.
- (10) Cumulative annual emission rate limits for all PVC dryers.
- (11) Dryers 313A through 313G each have identical adjacent vent stacks. Allowable emission rates shown are totals for both stacks combined.
- (12) Includes MSS emissions.

Date: November 30, 2012



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
AIR QUALITY PERMIT



A Permit Is Hereby Issued To  
**Formosa Plastics Corporation Texas**  
Authorizing the Construction and Operation of  
**Sitewide MSS Activities**  
Located at **Point Comfort, Calhoun County, Texas**  
Latitude 28° 41' 00" Longitude 096° 32' 30"

Permit: 83763 and PSDTX1230

Issuance Date : November 30, 2012

Renewal Date: November 30, 2022

  
For the Commission

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

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

## SPECIAL CONDITIONS

Permit Numbers 83763 and PSDTX1230

1. This permit authorizes emissions from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT) and the facilities covered by this permit are authorized to emit subject to the emission rate limits on the MAERT and other requirements specified in the special conditions.
2. This permit authorizes all site wide maintenance activities including bulk painting and abrasive blasting of equipment and structures, the spot use of aerosols, solvents and solvent products, lubricating and cleaning agents applied throughout the site and in the maintenance shops, the cold solvent degreaser operations and the Inherently Low Emitting Activities at the site identified in Attachment A.

Attachment A identifies the inherently low emitting MSS activities that may be performed at the plant. 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.

The permit holder shall maintain records of the information below for the site wide maintenance products at the site. The following documentation is required for each product:

- A. Chemical name(s), composition, and chemical abstract registry number if available.
  - B. Material Safety Data Sheet.
  - C. Maximum concentration of the chemical(s) in the product in weight percent
  - D. Maintenance product usage and the associated emissions shall be recorded each calendar quarter, with the rolling 12 month total emissions updated each quarter. Records must be available within 30 days of the end of each quarter.
3. Chemical constituents of new and reformulated site wide maintenance products are authorized as follows:
    - A. Chemical constituents previously authorized for site wide maintenance use remain authorized provided that the annual allowed usage rates do not exceed the amounts documented in the site wide maintenance, startup and

## SPECIAL CONDITIONS

Permit Numbers 83763 and PSDTX1230

Page 2

shutdown (MSS) permit application and the emissions do not exceed the allowable emission rates on the MAERT.

- B. Chemical constituents which are emitted and are subject to effects evaluation review and which were not previously authorized for site wide maintenance use may be authorized through the following procedure:
- (1) The Effects Screening Level (ESL) for each new chemical constituent shall be obtained from the latest on-line edition of the TCEQ's ESL List. For chemicals not included in the ESL List, ESLs may be obtained directly from the TCEQ's Toxicology Division.
  - (2) Short-term [pounds per hour (lb/hr)] and annual [tons per year (TPY)] emissions and corresponding ground level toxicological impacts shall be estimated for all new chemical constituents in the maintenance product using the ESL impacts analysis procedure documented in the site wide maintenance, startup and shutdown (MSS) permit application.
  - (3) The new maintenance product chemical constituent is authorized for use in the amount shown by the ESL impacts analysis to not exceed two times their ESL and the emissions do not exceed the allowable emission rates on the MAERT.
- C. The constituents of manually applied lubricants, pastes, resins, polymers and adhesives with vapor pressures below 0.002 psia at the application temperature with no expected potential emission are allowed and do not have to be evaluated or accounted in this permit. Note: The constituents of manually applied products have no expected potential emission if they are not spray applied and do not have a fine particulate consistency exposed to wind.
4. 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.

### Bulk Painting and Abrasive Blasting

5. Bulk painting operations include spray painting, brush and roller painting, cleanup activities, and mixing of paints and solvents on significant equipment and structure painting. The surface coating operations shall comply with the following requirements:
- A. High-volume, low-pressure spray equipment and/or airless spray equipment, or other equipment that is demonstrated to have the same or higher transfer efficiency, shall be used for all spraying of surface coatings.

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This equipment shall be operated and maintained within the limits set forth by the manufacturer.

- B. All paints and solvents shall be stored in closed containers when not in use.
  - C. All paint gun cleanup shall be performed by discharging the cleaning solvent into a container. The collected material shall be either recycled or properly removed from the plant site in accordance with all state and local regulations.
  - D. All unused paint, used solvents, and cleanup rags shall be stored in sealed containers until either recycled or properly removed from the plant site in accordance with all state and local regulations.
  - E. Paint and spray rate info for all spray equipment and bulk painting at the site shall be accounted for daily and must include:
    - (1) each coating and solvent used;
    - (2) the hours spray equipment was used; and
    - (3) the location spraying took place.
  - F. Bulk painting emissions shall be estimated and recorded and the rolling 12-month emissions updated quarterly. Records must be available within 30 day of the end of each quarter.
6. Outdoor abrasive blasting at the site shall meet the following requirements:
- A. Blast media usage is limited to 1200 lbs/hr and may be coal slag, nickel slag copper slag, nut shells or industrial garnet or other similar low dust media provided that it does not contain:
    - (1) asbestos or greater than 1.0 weight percent crystalline silica; and
    - (2) the weight fraction of any metal in the blast media with a short term effects screening level (ESL) less than 50 micrograms per cubic meter as identified in the most recently published TCEQ ESL list shall not exceed the ESL metal/1000.
  - B. The MSDS for each media used shall be maintained on site.
  - C. Blasting media usage hours, location and rate shall be recorded daily.

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- D. Abrasive blasting emissions shall be estimated and recorded and the rolling 12 month total emissions updated quarterly. Records must be available within 30 day of the end of each quarter.
7. During painting and abrasive blasting no visible emissions shall leave the property.

### Degreaser Requirements

8. The cold solvent cleaners shall meet the following requirements:
- A. Use a solvent that has a vapor pressure less than 0.3 psia at 100oF, and is not heated.
  - B. Any solvent spray system shall produce a solid fluid stream (not a fine, atomized, or shower type spray) with a minimal operating pressure that is necessary to prevent splashing above the acceptable freeboard. The operating pressure shall not exceed 10 pound per square inch gauge.
  - C. The degreaser must maintain a freeboard that provides a ratio equal to or greater than 0.7, or a 4 inch water cover (solvent must be insoluble in and heavier than water). To determine the free board ratio, the freeboard height measurement is taken from the top of the degreaser to the top of the solvent level divided by the smallest width measurement at any height from the solvent level to the top of the degreaser.
  - D. Have a cover which must be kept closed whenever parts are not being handled in the cleaner.
  - E. Have an internal-cleaned parts drainage rack or facility, for enclosed draining under the cover and parts shall be drained for at least 15 seconds or until dripping ceases.
  - F. Porous or absorbent materials, such as cloth, leather, wood, or rope, shall not be degreased.
  - G. Leaks shall be repaired immediately, or the degreaser shall be shut down until repairs are completed.
  - H. Spills shall be cleaned up immediately. Towels, rags, or other absorbent materials used for cleanup shall be placed into sealed containers immediately after use and shall be kept in storage until properly removed from the site.
  - I. Degreaser tank cleaning shall be conducted in a manner so as to minimize fugitive emissions. Residue, sludge, or contaminated cleaning solution removed from the degreaser will be stored in covered containers until

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removal from the site and recycled or disposed of in accordance with applicable regulations. Containers of solvent shall not be disposed of or transferred to another party such that the solvent can evaporate into the atmosphere.

- J. A permanent and conspicuous label summarizing proper operating procedures to minimize emissions shall be posted on or near the degreaser.
  - K. Emission records for each degreaser shall be kept based on total solvent makeup, gross usage minus spent solvent disposal, and updated when the solvent is changed out.
9. With the exception of the MAERT emission limits, these permit conditions become effective 180 days after this permit application, PI-1 dated January 3, 2008, has been approved. During the 180 day period, the permit holder shall maintain records of MSS activities. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded.

Dated: November 30, 2012

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Attachment A  
Inherently Low Emitting Activities

<b>Activity</b>	<b>Emissions</b>
	VOC
Instrumentation/analyzer maintenance	X
Gas cylinder replacement	X
Open Container Sampling	X
Closed system sampling	X

Dated: November 30, 2012

Emission Sources - Maximum Allowable Emission Rates

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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)
SITE-MNT PAINT	Site-Wide Maintenance - Bulk Painting	VOC	21.12	7.3
		PM	6.09	2.1
		PM <sub>10</sub>	1.87	0.03
		PM <sub>2.5</sub>	0.19	0.003
		IOC-U	0.10	0.008
SITE-MNT SHOPS	Site-Wide Maintenance - Spot Usage	VOC	34.35	9.5
		PM	0.06	0.004
		PM <sub>10</sub>	0.06	0.004
		PM <sub>2.5</sub>	0.002	0.0001
		IOC-U	0.10	0.0012
		Exempt Solvents	3.5	1.7
SITE-MNT BLAST	Site-Wide Outdoor Abrasive Blasting	PM	3.43	0.20
		PM <sub>10</sub>	0.41	0.02
		PM <sub>2.5</sub>	0.06	0.01
SITE-ILE	Site-Wide Inherently Low Emitting Maintenance Activities	VOC	0.21	0.10
EP-4	EDC Unit Degreaser	VOC	0.14	0.60
EP-6	Ethylene Glycol Unit Degreaser	VOC	0.14	0.60
EP-7	Olefins I Solvent Degreaser	VOC	0.14	0.60

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
EP-9	Olefins II Solvent Degreaser	VOC	0.14	0.60
EP-10	PO II Solvent Degreaser	VOC	0.14	0.60
LL-EP-8	LLDPE/PO I Solvent Degreaser	VOC	0.14	0.60

- (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) Exempt Solvent - Those carbon compounds or mixtures of carbon compounds used as solvents which have been excluded from the definition of volatile organic compound.
- VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- IOC-U - inorganic compounds (unspeciated)
- 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
- (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.

Date: November 30, 2012