

# FEDERAL OPERATING PERMIT

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

AUTHORIZING THE OPERATION OF  
Formosa Point Comfort Plant  
Energy/Steam Generating Facility  
Petrochemical Manufacturing

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

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

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

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

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

Permit No: Q3421 Issuance Date: \_\_\_\_\_

\_\_\_\_\_  
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, Subpart ZZZZ or DDDDD as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113,

Subchapter C, §§ 113.1090 or 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)
- D. Permit holder shall comply with the following requirements for steam generators:
  - (i) Emissions from any oil or gas fuel-fired steam generator with a heat input capacity greater than 2,500 MMBtu per hour may not exceed 0.1 pound of TSP per MMBtu of heat input, averaged over a two-hour period, as required in 30 TAC § 111.153(c) (relating to Emissions Limits for Steam Generators).
- 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 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**

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

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

7. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule (including the terms, conditions, monitoring, recordkeeping, and reporting identified in registered PBRs and permits by rule identified in the PBR Supplemental Tables dated June 14, 2024 in the application for project 36772, 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
8. 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.
9. 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**

10. 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.
11. 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)

## **Permit Location**

12. 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)**

13. 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**

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<b>Applicable Requirements Summary .....</b>	<b>11</b>
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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
CT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111-2	30 TAC Chapter 111, Visible Emissions	No changing attributes.
EMERG-ENG	SRIC ENGINES	N/A	60III	40 CFR Part 60, Subpart III	No changing attributes.
EMERG-ENG	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
FIRE-ENG1	SRIC ENGINES	N/A	60III	40 CFR Part 60, Subpart III	No changing attributes.
FIRE-ENG1	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
FIRE-ENG2	SRIC ENGINES	N/A	60III	40 CFR Part 60, Subpart III	No changing attributes.
FIRE-ENG2	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-CFB	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	CFB-1, CFB-2	60Db-3	40 CFR Part 60, Subpart Db	No changing attributes.
GRP-CFB	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	CFB-1, CFB-2	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
GRP-CFBSTK	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	CFB-S1, CFB-S2	R1111	30 TAC Chapter 111, Visible Emissions	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)
CT	EP	R1111-2	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
EMERG-ENG	EU	60III	CO	40 CFR Part 60, Subpart III	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a CO emission limit of 3.5 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
EMERG-ENG	EU	60III	NMHC and NO <sub>x</sub>	40 CFR Part 60, Subpart III	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 75 KW and less than or equal to 560 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with an NMHC+NO <sub>x</sub> emission limit of 4.0 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR	§ 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)
						1039-Appendix I.			
EMERG-ENG	EU	60III	PM	40 CFR Part 60, Subpart III	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
EMERG-ENG	EU	63ZZZ	112(B) HAPS	40 CFR Part 63, Subpart ZZZ	§ 63.6590(b)(1) § 63.6595(c) § 63.6640(f)(1) § 63.6640(f)(2) § 63.6640(f)(2)(i) § 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(f)
FIRE-ENG1	EU	60III	NMHC and NO <sub>x</sub>	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)	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	§ 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)
						NMHC+NO <sub>x</sub> emission limit of 4.0 g/KW-hr, as listed in Table 4 to this subpart.			
FIRE-ENG1	EU	60III	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)	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)
FIRE-ENG1	EU	63ZZZ	112(B) HAPS	40 CFR Part 63, Subpart ZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart III, for compression ignition engines or 40 CFR part 60 subpart JJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
FIRE-ENG2	EU	60III	NMHC and NO <sub>x</sub>	40 CFR Part 60, Subpart III	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b)	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power	§ 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)
					[G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	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+NOx emission limit of 4.0 g/KW-hr, as listed in Table 4 to this subpart.			
FIRE-ENG2	EU	60III	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)	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)
FIRE-ENG2	EU	63ZZZ	112(B) HAPS	40 CFR Part 63, Subpart ZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart III, for compression ignition engines or 40 CFR part 60 subpart JJJ, for spark ignition engines as	None	None	None



### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						applicable. No further requirements apply for such engines under this part.			
GRP-CFB	EU	60Db-3	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.44b(l)(2) § 60.44b(h) § 60.44b(i) § 60.46b(a)	On or after the §60.8 performance test is completed, for a facility that commenced construction after 07/09/1997 that has a low heat release rate and combusts natural gas or distillate oil in excess of 30 percent of the heat input on a 30-day rolling average from the combustion of all fuels, a limit determined by use of the specified formula.	§ 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)
GRP-CFB	EU	60Db-3	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
GRP-CFB	EU	60Db-3	PM (Opacity)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from	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)
						fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).			
GRP-CFB	EU	60Db-3	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.42b(k)(2)	On and after the §60.8 performance test is completed, units constructed, reconstructed, or modified after February 28, 2005, firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other 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) § 60.49b(r)(1)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(r) § 60.49b(r)(1)
GRP-CFB	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio must conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540.	§ 63.7515(d) § 63.7525(a)(7) § 63.7540(a) [G]§ 63.7540(a)(10)	§ 63.7555(a) § 63.7555(a)(1) § 63.7560(a) § 63.7560(b) § 63.7560(c)	§ 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
GRP-CFBSTK	EP	R1111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(B) § 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 20% averaged over a six minute period for any source on which construction was	§ 111.111(a)(1)(D) [G]§ 111.111(a)(1)(F)	§ 111.111(a)(1)(C) § 111.111(a)(1)(D)	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)
						begun after January 31, 1972.			

**Additional Monitoring Requirements**

**Periodic Monitoring Summary ..... 19**

### Periodic Monitoring Summary

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

**Permit Shield**

**Permit Shield ..... 21**

### Permit Shield

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

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
CT	N/A	30 TAC Chapter 115, HRVOC Vent Gas	Site is not located in HGB area
CT	N/A	40 CFR Part 63, Subpart Q	Cooling towers not operated with chromium-based water treatment chemicals
GRP-CFB	CFB-1, CFB-2	30 TAC Chapter 117, Subchapter B	Site is not in HGB ozone nonattainment area
GRP-CFB	CFB-1, CFB-2	30 TAC Chapter 117, Subchapter E, Division 1	Equipment was not placed in service before 12/31/1995
GRP-CFB	CFB-1, CFB-2	30 TAC Chapter 117, Utility Electric Generation	Site is not in HGB ozone nonattainment area
GRP-CFB	CFB-1, CFB-2	40 CFR Part 60, Subpart D	Unit greater than 250 MMBtu/hr constructed after June 19, 1986
GRP-CFB	CFB-1, CFB-2	40 CFR Part 60, Subpart Da	Site does not include an electric utility steam generating unit since they do not supply more than 1/3 of its potential output capacity and more than 25 MW to the grid for sale.
GRP-CFB	CFB-1, CFB-2	40 CFR Part 60, Subpart Dc	The maximum design heat capacity is greater than 29 MW.
GRP-CFB	CFB-1, CFB-2	40 CFR Part 72	Does not produce electricity for sale and are not "utility units" per 72.2
GRP-CFB	CFB-1, CFB-2	40 CFR Part 96	Does not produce electricity for sale.
GRP-CFBSTK	CFB-S1, CFB-S2	30 TAC Chapter 115, HRVOC Vent Gas	Site is not located in HGB area

**New Source Review Authorization References**

<b>New Source Review Authorization References .....</b>	<b>23</b>
<b>New Source Review Authorization References by Emission Unit .....</b>	<b>24</b>



### 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.

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: PSDTX1053	Issuance Date: 02/04/2021
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.	
Authorization No.: 76044	Issuance Date: 02/04/2021
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.511	Version No./Date: 09/04/2000

### New Source Review Authorization References by Emissions Unit

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

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization**
CFB-1	CFB UNIT 1	76044, PSDTX1053
CFB-2	CFB UNIT 2	76044, PSDTX1053
CFB-S1	CFB UNIT 1 STACK	76044, PSDTX1053
CFB-S2	CFB UNIT 2 STACK	76044, PSDTX1053
CT	COOLING TOWER	76044, PSDTX1053, 106.262/11/01/2003 [171880]
EMERG-ENG	EMERGENCY ENGINE	106.511/09/04/2000
FIRE-ENG1	FIRE ENGINE 1	106.511/09/04/2000
FIRE-ENG2	FIRE ENGINE2	106.511/09/04/2000

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

**Appendix A**

**Acronym List ..... 26**

## Acronym List

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

ACFM	actual cubic feet per minute
AMOC	alternate means of control
ARP	Acid Rain Program
ASTM	American Society of Testing and Materials
B/PA	Beaumont/Port Arthur (nonattainment area)
CAM	Compliance Assurance Monitoring
CD	control device
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
COMS	continuous opacity monitoring system
CVS	closed vent system
D/FW	Dallas/Fort Worth (nonattainment area)
EP	emission point
EPA	U.S. Environmental Protection Agency
EU	emission unit
FCAA Amendments	Federal Clean Air Act Amendments
FOP	federal operating permit
gr/100 scf	grains per 100 standard cubic feet
HAP	hazardous air pollutant
H/G/B	Houston/Galveston/Brazoria (nonattainment area)
H <sub>2</sub> S	hydrogen sulfide
ID No.	identification number
lb/hr	pound(s) per hour
MACT	Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr	Million British thermal units per hour
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NESHAP	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PEMS	predictive emissions monitoring system
PM	particulate matter
ppmv	parts per million by volume
PRO	process unit
PSD	prevention of significant deterioration
psia	pounds per square inch absolute
SIP	state implementation plan
SO <sub>2</sub>	sulfur dioxide
TCEQ	Texas Commission on Environmental Quality
TSP	total suspended particulate
TVP	true vapor pressure
U.S.C.	United States Code
VOC	volatile organic compound

**Appendix B**

<b>Major NSR Summary Table .....</b>	<b>28</b>
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**Major NSR Summary Table**

Permit Numbers 76044 and PSDTX1053					Issuance Date: February 4, 2021		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
FUG-NH <sub>3</sub> (5)	Aqueous Ammonia Fugitives	NH <sub>3</sub>	0.01	0.10	16, 17, 26	26, 28	
<b>Gas-Fired Boilers (Hourly Limits)</b>							
CFB-S1	Circulating Fluidized Bed Boiler (1,500 MMBtu/hr) – Standard Operations Hourly Limits.	NO <sub>x</sub> (1-hr)	150.00	--	3, 5, 8, 20, 21, 22	3, 5, 19, 20, 21, 22, 23, 26, 27, 28	3, 20, 21, 29
		SO <sub>2</sub> (1-hr)	1.17	--			
		PM/PM <sub>10</sub> /PM <sub>2.5</sub>	11.4	--			
		CO (1-hr)	165.00	--			
		VOC	7.65	--			
		H <sub>2</sub> SO <sub>4</sub>	0.04	--			
		NH <sub>3</sub>	9.60	--			
CFB-S2	Circulating Fluidized Bed Boiler (1,500 MMBtu/hr) - Standard	NO <sub>x</sub> (1-hr)	150.00	--	3, 5, 8, 20, 21, 22	3, 5, 19, 20, 21, 22, 23, 26, 27, 28	3, 20, 21, 29
		SO <sub>2</sub> (1-hr)	1.17	--			
		PM/PM <sub>10</sub> /PM <sub>2.5</sub>	11.4	--			

**Major NSR Summary Table**

Permit Numbers 76044 and PSDTX1053					Issuance Date: February 4, 2021		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
	Operations Hourly Limits	CO (1-hr)	165.00	--			
		VOC	7.65	--			
		H <sub>2</sub> SO <sub>4</sub>	0.04	--			
		NH <sub>3</sub>	9.60	--			
Gas-Fired Boilers (Startup, Shutdown, and Optimization Activities)							
CFB-S1	Circulating Fluidized Bed Boiler (1,500 MMBtu/hr) - Startup, Shutdown, and Optimization Activities Hourly Limits	NO <sub>x</sub> (1-hr)	239.00	--	3, 5, 8, 15, 21, 22	3, 5, 9, 21, 22, 23, 26, 28	3, 21, 29
		SO <sub>2</sub> (1-hr)	2900.00	--			
		PM/PM <sub>10</sub> /PM <sub>2.5</sub>	71.00	--			
		CO (1-hr)	207.00	--			
		VOC	14.00	--			
		NH <sub>3</sub>	11.60	--			
CFB-S2	Circulating	NO <sub>x</sub> (1-hr)	239.00	--	3, 5, 8, 15, 22	3, 5, 9, 22, 23, 26, 28	3, 21, 29

**Major NSR Summary Table**

Permit Numbers 76044 and PSDTX1053					Issuance Date: February 4, 2021		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
	Fluidized Bed Boiler (1,500 MMBtu/hr) - Startup, Shutdown, and Optimization Activities Hourly Limits	SO <sub>2</sub> (1-hr)	2900.00	--			
		PM/PM <sub>10</sub> /PM <sub>2.5</sub>	71.00	--			
		CO (1-hr)	207.00	--			
		VOC	14.00	--			
		NH <sub>3</sub>	11.60	--			
Gas-Fired Boilers (Annual Limits)							
CFB-S1	Circulating Fluidized Bed Boiler (1,500 MMBtu/hr) – Annual Limits	NO <sub>x</sub>	--	394.2	3, 5, 8, 15, 22, 26, 47	3, 5, 9, 19, 22, 23, 26, 26, 28	3, 21, 29
		SO <sub>2</sub>	--	5.12			
		PM/PM <sub>10</sub> /PM <sub>2.5</sub>	--	49.93			
		CO	--	657.0			
		VOC	--	33.51			
		H <sub>2</sub> SO <sub>4</sub>	--	0.2			



**Major NSR Summary Table**

Permit Numbers 76044 and PSDTX1053					Issuance Date: February 4, 2021		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		NH <sub>3</sub>	--	21.0			
CFB-S2	Circulating Fluidized Bed Boiler (1,500 MMBtu/hr) – Annual Limits	NO <sub>x</sub>	--	394.2	3, 5, 8, 15, 22, 26, 47	3, 5, 9, 19, 22, 23, 26, 26, 28	3, 21, 29
		SO <sub>2</sub>	--	5.12			
		PM/PM <sub>10</sub> /PM <sub>2.5</sub>	--	49.93			
		CO	--	657.0			
		VOC	--	33.51			
		H <sub>2</sub> SO <sub>4</sub>	--	0.2			
		NH <sub>3</sub>	--	21.0			
Other Sources							
T-ACID	Acid Storage Tank	H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01	17, 26	26, 28	
T-BASE	Base Storage Tank	Bases	<0.01	<0.01	17, 26	26, 28	
CT-1/12	Cooling	PM	3.36	14.52	24, 26	26, 28	

**Major NSR Summary Table**

Permit Numbers 76044 and PSDTX1053					Issuance Date: February 4, 2021		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
	Towers 1-12	PM <sub>10</sub>	0.99	4.34			
		PM <sub>2.5</sub>	0.07	0.29			
		Chlorine Compounds (6)	0.01	<0.01			
CBFUG-MSS	CFB-MNT (5)	PM	0.01	0.01		14	
		PM <sub>10</sub>	0.01	0.01			
		PM <sub>2.5</sub>	0.01	0.01			
		VOC	1.06	0.04			
		NH <sub>3</sub>	1.17	<0.01			
FUG-NG (5)	FUG-NG	VOC	0.28	1.22	26	26, 28	
FUG-Cl2 (5)	FUG-Cl2	Cl <sub>2</sub>	0.02	0.06	18, 26	18, 26, 28	

(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

H<sub>2</sub>SO<sub>4</sub> - sulfuric acid

NH<sub>3</sub> – ammonia

Cl<sub>2</sub> - chlorine

(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) Chlorine compound emissions consist of HOCl and HCl emissions



## Texas Commission on Environmental Quality Air Quality Permit

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

Permits: 76044 and PSDTX1053

Issuance Date: February 4, 2021

Expiration Date: February 4, 2031

  
\_\_\_\_\_  
For the Commission

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

operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]

8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources-- Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)] <sup>1</sup>
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC§ 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to "air pollution" as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit. <sup>1</sup>

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

## Common Acronyms in Air Permits

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

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

## **Special Conditions**

Permit Numbers 76044 and PSDTX1053

### **Emission Rates and Permit Representations**

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. Compliance with the annual emission limits shall be based on throughput for a rolling 12-month year rather than the calendar year.
2. Emission limits are based upon representations in the permit application dated May 24, 2005, and subsequent submittals.

### **Federal Applicability**

3. The Boilers, identified as Emission Point Nos. (EPNs) CFB-S1 and CFB-S2, shall comply with applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations in Title 40 Code of Federal Regulations (40 CFR) as follows:
  - A. Part 60, Standards of Performance for New Stationary Sources: Subpart A: General Provisions and Subpart Db: Standards of Performance for Industrial-Commercial-Institutional Electric Utility Steam Generating Units.
  - B. Part 63, National Emission Standards for Hazardous Air Pollutants: Subpart A: General Provisions and Subpart DDDDD for Industrial, Commercial, and Institutional Boilers and Process Heaters.
4. If any condition of this permit is more stringent than the regulations identified in Special Condition No. 3, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

### **Fuel Specifications, Operating Limitations, Performance Standards, and Construction Specifications**

5. Fuel fired in the Boilers (EPNs CFB-S1 and CFB-S2), shall be limited to:
  - A. Pipeline-quality natural gas.
  - B. Use of any other fuel will require prior approval from the permitting authority.
  - C. Upon request by the Executive Director of the Texas Commission on Environmental Quality (TCEQ) or any air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel fired in the Boilers or shall allow air pollution control agency representatives to obtain a sample for analysis.
6. The Boilers shall be limited to a maximum heat input of 1,500 million British thermal units per hour (MMBtu/hr) (each), averaged over a calendar month, based on the higher heating value (HHV) of the fuel fired.
7. Opacity of emissions from EPNs: CFB-S1 and CFB-S2 must not exceed 10 percent, averaged over a six-minute period, except for those periods described in Title 30 Texas Administrative Code § 111.111(a)(1)(E) [30 TAC § 111.111(a)(1)(E)].
8. Emissions from EPNs CFB-S1 and CFB-S2 shall not exceed the NO<sub>x</sub>, and NH<sub>3</sub> limits established below except that emissions during periods of planned start-up and shutdown shall not be used to calculate the rolling 30-day average or the hourly average. During periods of planned startup and shutdown, the holder of this permit shall not exceed the hourly mass emission limits in the attached maximum allowable emission rates table (MAERT) and the holder of the permit shall operate the Boilers and associated air pollution control equipment in accordance with good air pollution control practices to minimize emissions.



A. Standards demonstrated by Continuous Emissions Monitoring Systems (CEMS)

Pollutant <sup>1</sup>	Performance Standard (lb/MMBtu) <sup>2</sup>	Compliance Averaging Period
NO <sub>x</sub>	0.060	30-day rolling
	0.10	Hourly
	Performance Standard (ppmv) <sup>3</sup>	
NH <sub>3</sub>	10	hourly
	5	12-month rolling

\*Notes:

1. NO<sub>x</sub> - nitrogen oxides NH<sub>3</sub> – ammonia
2. lb/MMBtu - pounds of emissions per million Btu of heat input. Heat input is based on fuel HHV.
3. ppmv - parts per million by volume, dry, adjusted to 5 percent (%) oxygen (O<sub>2</sub>).
9. The holder of this permit shall operate the Boilers and associated air pollution control equipment in accordance with good air pollution control practice to minimize emissions during routine startup and shutdown, by operating in accordance with a written startup and shutdown plan. The plan shall include detailed procedures for review of relevant operating parameters of the Boilers and associated air pollution control equipment during routine startup and shutdowns. The plan shall also address readily foreseeable startup scenarios and provide for appropriate review of the operational condition of the boiler before initiating startup.

Emissions during startup shall not exceed the values listed in the attached MAERT.

Only planned and routine startup/shutdown operations are authorized by this permit. Emissions resulting from any unscheduled and/or unplanned startup/shutdown activity associated with an upset (emissions event) are not authorized by this permit. Excess emissions from upsets (emission events) are violations of the permit and must be included in any determination of compliance.

10. The Boiler Stacks, EPNs CFB-S1 and CFB-S2, will be approximately 316 feet tall with an exit diameter of approximately 10.8 feet. Stack sampling ports and platform(s) shall be constructed on the stack as specified in the attachment entitled "Chapter 2, Stack Sampling Facilities," or an alternate design may be required at a later date if determined necessary by the appropriate TCEQ

Regional Director. Adequate advance notice shall be provided by the TCEQ if an alternate design is required.

**Planned Maintenance, Startup, and Shutdown**

11. This permit authorizes the planned MSS activities listed in Attachment A, Attachment B, and the MAERT. Attachment A identifies the inherently low-emitting (ILE) planned maintenance activities that this permit authorizes to be performed. Attachment B identifies the planned maintenance activities that are authorized by permit by rule (PBR).
12. Vacuum trucks used during planned maintenance must use submerged loading into the truck tank when pumping liquids.
13. When a planned maintenance activity is associated with a VOC liquid storage facility and may result in VOC emissions from that facility, the permit holder shall not open that facility to the atmosphere in connection with the planned maintenance activity until the VOC liquids are removed from that facility to the maximum extent practicable.

14. Compliance with the emission limits for planned MSS activities identified in the MAERT of this permit shall be demonstrated as follows.
  - A. For each pollutant emitted during ILE planned maintenance activities, the permit holder shall annually confirm the continued validity of the estimated potential to emit represented in the MSS permit amendment application. The total emissions from all ILE planned maintenance activities identified in Attachment A of this permit shall be considered to be no more than the estimated potential to emit for those activities that are represented in the permit amendment application.
15. The permit holder shall determine the emissions during planned MSS activities for use in Special Condition No. 14 as follows.
  - A. For each pollutant, associated with planned activities authorized as requested in permit application dated January 4, 2013, that are not described as ILE in Special Condition No. 14.A., the permit holder shall calculate the pollutant's emissions during all occurrences of each type of planned MSS activity for each calendar month using the frequency of the planned MSS activity identified in work orders or equivalent records and the emissions of the pollutant during the planned MSS activity, either
    - (1) as represented in the planned MSS permit application; or
    - (2) 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:
      - (a) use of emission factor(s), facility-specific parameter(s), and/or engineering knowledge of the facility's operations;
      - (b) 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;
      - (c) 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
      - (d) use of parametric monitoring system data applicable to the facility.

### **Chemical and Fuel Storage**

16. Aqueous ammonia storage tanks shall be located within a physical barrier to traffic. Tank containment shall be employed with a minimum of 110% of tank volume. Vapors resulting from the filling operations of the aqueous ammonia storage tank(s) shall be collected and vapor returned back to the transport vessel. The relief valve system shall be designed and operated to ensure that there are no working loss emissions to the atmosphere resulting from filling operations, and that there are no breathing losses during normal non-filling (standing) operations. The fill level of the aqueous ammonia storage tank shall not exceed a level that is in line with good engineering practices and shall include a high-level alarm and a high-high level alarm. In addition, seal-less pumps shall be used in all piping handling aqueous ammonia.
17. Audio, olfactory, and visual checks for ammonia and water treatment chemical leaks shall be made once per shift within the operating area.
  - A. No later than one hour following detection of a leak, plant personnel shall take the following actions:
    - (1) Locate and isolate the leak.
    - (2) Use a leak collection or containment system to control the leak until repair or replacement can be made.
  - B. Within 24 hours of detection of a leak, plant personnel shall commence repair or replacement of the leaking component as appropriate.

## **Fugitives**

Piping, Valves, Pumps, and Compressors in contact with chlorine – 28AVO

18. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
- 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 at least one of the following actions:
    - (1) Isolate the leak.
    - (2) Commence repair or replacement of the leaking component.
    - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.
- 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.

## **Initial Demonstration of Compliance**

19. Initial stack testing was completed in May 2013 and March 2012 for Boilers 1 and 2, respectively. The permit holder shall maintain all records of stack sampling performed on the Boilers.

## **Test Methods and Procedures**

20. Test Methods
- A. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual, EPA Test Methods in 40 CFR Part 60, Appendix A and 40 CFR Part 51, Appendix M, EPA Conditional Test Methods, and American Society for Testing and Materials (ASTM) as follows:
    - (1) Appendix A, Methods 1 through 4, as appropriate, for exhaust flow, diluent, and moisture concentration;
    - (2) Appendix A, Method 5 or 17, modified to include back-half condensibles, for the concentration of PM;
    - (3) Appendix A, Method 5 or 17, for the filterable concentration of PM (front half catch);
    - (4) Appendix A, Method 6, 6a, 6c, or 8, for the concentration of SO<sub>2</sub>;
    - (5) Appendix A, Method 7E for the concentrations of NO<sub>x</sub> and O<sub>2</sub>, or equivalent methods;
    - (6) Appendix A, Method 8 or a modified Method 8 for H<sub>2</sub>SO<sub>4</sub>;
    - (7) Appendix A, Method 9 for opacity, and Method 22 for visual determinations;
    - (8) Appendix A, Method 10 for the concentration of CO;
    - (9) Appendix A, Method 19, for applicable calculation methods;
    - (10) Appendix A, Method 22, for visual determination of fugitive emissions from material sources;

- (11) Appendix A, Method 25A, modified to exclude methane and ethane, for the concentration of VOC (to measure total carbon as propane);
  - (12) EPA Conditional Test Method 27 (CTM-027), for NH<sub>3</sub>;
  - (13) Appendix M, Methods 201A and 202, or Appendix A, RM 5, modified to include back-half condensable, for the concentration of PM less than 10 microns in diameter, PM<sub>10</sub>;
  - (14) Appendix M, Methods 201A or Appendix A, RM 5, for the filterable concentration of particulate matter less than 10 microns in diameter, PM<sub>10</sub> (front half catch);
  - (15) Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling.
- B. 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.
- (1) The notice shall include:
    - (a) Date for pretest meeting.
    - (b) Date sampling will occur.
    - (c) Name of firm conducting sampling.
    - (d) Type of sampling equipment to be used.
    - (e) Method or procedure to be used in sampling.
  - (2) 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. The permit holder shall present at the pretest meeting the manner in which stack sampling will be executed in order to demonstrate compliance with emission standards found in this permit and 40 CFR Part 60, Subpart Db.
  - (3) Prior to the pretest meeting, a written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ, EPA or ASTM sampling procedures shall be made available to the TCEQ. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.
- C. Information in the test report shall include the following data for each test run:
- (1) average steam generation rate in millions of pounds per hour;
  - (2) average generator output in MW;
  - (3) daily heat content of the fuel measured in accordance with EPA RM 19 to show compliance with 40 CFR Part 60, Subpart Db;
  - (4) control device operating rates, including SNCR reagent injection ;
  - (5) emissions in the units of the limits of this permit, lb/hr and lb/MMBtu, three-hour or 30-day average, as appropriate; and
  - (6) any additional records deemed necessary during the stack sampling pre-test meeting.
- D. Two copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached conditions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

- (1) One copy to the TCEQ Corpus Christi Regional Office.
- (2) One copy to the TCEQ Austin Office of Air, Air Permits Division.

### **Continuous Demonstration of Compliance**

21. The holder of this permit shall install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NO<sub>x</sub> and CO when firing natural gas from EPNs: CFB-S1 and CFB-S2. Diluents to be measured include O<sub>2</sub> or CO<sub>2</sub>. The CEMS data shall be used to determine continuous compliance with the NO<sub>x</sub> and CO emission limitations in Special Condition No. 3A, Special Condition No. 8A, and the attached MAERT.

Continuous compliance with the performance standards of Special Condition No. 8A shall commence on the first boiler operating day of the 30-day initial performance testing required by 40 CFR Part 60, Subpart Db.

- (a) The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9 (PS 1 through PS 9), 40 CFR Part 60, Appendix B or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
- (b) The holder of this permit shall assure that the CEMS meets the applicable quality assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3 and any CEMS downtime and all cylinder gas audit exceedances of  $\pm 15$  percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
- (c) The monitoring data shall be reduced to hourly average concentrations at least once every day, using normally a minimum of four equally spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in pounds per hour at least once every day. Pound per hour data shall be summed on a monthly basis to tons per year and used to determine compliance with the annual emissions limits of this permit. If the CEMS malfunctions, then the recorded concentrations may be reduced to units of the permit allowable as soon as practicable after the CEMS resumes normal operation.
- (d) The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required relative accuracy test audits in order to provide them the opportunity to observe the testing.
- (e) If applicable, each CEMS will be required to 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 75, Appendix A and B, as an acceptable alternative to paragraph A. of this condition.

- (f) Each CEMS shall be operational during 95% of the operating hours of the Boilers, exclusive of the time required for zero and span checks. If this operational criterion is not met for the reporting quarter, the holder of this permit shall implement a monitor quality improvement plan. The monitor quality improvement plan shall be developed and submitted to the TCEQ Corpus Christi Regional Office for their approval within six months. The plan should address downtime issues to improve availability and reliability. The plan should provide additional assurance of compliance including recordkeeping of reagent flow rates for monitor downtime periods.
22. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the concentration of  $\text{NH}_3$  from EPNs CFB-S1 and CFB-S2. The  $\text{NH}_3$  concentrations shall be corrected and reported in accordance with Special Condition No. 8A. The CEMS data shall be used to determine continuous compliance with the  $\text{NH}_3$  performance specifications in Special Condition No. 8A and the MAERT. Any other method used for measuring  $\text{NH}_3$  slip shall require prior approval from the TCEQ Corpus Christi Regional Office, with consultation between the Regional Office and the TCEQ Austin Air Permits Division.
23. If any emission monitor fails to meet specified performance (operational during 95% of the operating hours) criteria contained in this permit, it shall be repaired or replaced as soon as reasonably possible. Records of on-stream time (operational time) for all monitors identified in this permit shall be maintained on site for a period of five years and made available to representative of the TCEQ upon request.
24. Following the initial demonstration of compliance, ongoing compliance with the emission rates in the MAERT for the cooling tower, EPNs: CT-1 through CT-12, will be based on annual inspection of modules, and repair as necessary to maintain drift eliminator structural integrity.
25. The Executive Director of the TCEQ or his designated representative may also require sampling conducted in accordance with the methods and procedures specified in Special Condition No. 19 to directly measure the lb/hr emission rate, in which case the sampled lb/hr emission rate will be used to determine compliance with the applicable emission rate in the MAERT.
26. The holder of this permit shall use continuous emissions monitoring data, sampling data, firing rates, etc., to perform emission calculations at least once every month in order to verify compliance with the emissions limits of this permit for both the short term (lb/hr) and annual (ton/year based on a 12- month rolling average) emission rates. The holder of this permit shall maintain all records necessary to demonstrate compliance with the short-term (lb/hr) and annual (tons/year) emissions limits and provide such demonstration of compliance to representatives of the TCEQ Regional Office and/or central office upon request.

### Recordkeeping Requirements

27. The following records shall be kept at the plant for the life of the permit. All records required in this permit shall be made available at the request of personnel from the TCEQ, the EPA, or any air pollution control agency with jurisdiction.
- (a) A copy of this permit.
  - (b) Permit application dated May 24, 2005, and subsequent representations submitted to the TCEQ.
  - (c) A complete copy of the testing reports and records of the initial air emissions performance testing completed pursuant to the Initial Demonstration of Compliance.
  - (d) Required stack sampling results or other air emissions testing (other than CEMS) that may be conducted on units authorized under this permit after the date of issuance of this permit.
28. The following records shall be kept for a minimum of five years after collection and shall be made immediately available upon request to representatives of the TCEQ, the EPA, or any local air pollution control program having jurisdiction. Records shall be legible and maintained in an orderly manner. The following records shall be maintained:
- (a) Continuous emission monitoring data for NO<sub>x</sub>, CO, NH<sub>3</sub>, and diluent gases, O<sub>2</sub> or CO<sub>2</sub>, from CEMS to demonstrate compliance with the emission rates listed in the MAERT and performance standards listed in this permit for pollutants that are monitored by CEMS. Data retention at intervals less than one hour is not required. Records should identify the times when emissions data have been excluded from the calculation of average emission rates because of startup, shutdown, maintenance, and malfunction along with the justification for excluding data. Records should also identify factors used in calculations that are used to demonstrate compliance with emissions limits and performance standards.
  - (b) Files of all CEMS quality assurance measures, calibration checks, adjustments and maintenance performed on these systems.
  - (c) Steam turbine generator hourly gross electrical output in MW, including identification of shutdown intervals, for compliance with output-based performance specifications of this permit.
  - (d) Ammonia feed rate established during a successful initial performance test.
  - (e) Records of cleaning and maintenance performed on abatement equipment. A log should be kept with descriptions of the activity performed and the time period over which it was performed.
  - (f) Records of audio, olfactory, and visual checks for ammonia and water treatment chemicals leaks and repairs to show compliance with Special Condition No. 17.

- (g) Required stack sampling results or other air emissions testing that may be conducted on units authorized under this permit after the initial demonstration of compliance testing of this permit.
- (h) Records to demonstrate compliance with the cooling tower requirements of Special Condition No. 24.
  - i. Records of maintenance activities and their emissions as required by Special Condition Nos. 14 and 15.

### **Reporting**

29. The holder of this permit shall submit to the TCEQ Corpus Christi Regional Office and the Air Enforcement Branch of EPA in Dallas 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 this permit.

Date: February 4, 2021



Attachment A

Inherently Low Emitting (ILE) Planned MSS Activities

Planned Maintenance Activity	EPN	Emissions					
		NH <sub>3</sub>	VOC	NO <sub>x</sub>	CO	PM	SO <sub>2</sub>
Aqueous Ammonia Tank Maintenance	CBFUG-MSS	x					
Miscellaneous Maintenance <sup>1</sup>	CBFUG-MSS					x	
Sludge Management <sup>2</sup>	CBFUG-MSS		x				
Gaseous Piping	CBFUG-MSS		x				
Lube Oil, Diesel and Other Oil Piping Small Equipment Components and Storage Tank Maintenance	CBFUG-MSS		x				
Small equipment and fugitive component repair/replacement in NH <sub>3</sub> service <sup>3</sup>	CBFUG-MSS	x					

ILE Table Notes:

1. Includes, but is not limited to, fugitive emissions from refractory maintenance repair & replacement and SNCR nozzle cleaning.
2. Includes, but is not limited to, management by vacuum truck/dewatering of materials in open pits and ponds, sumps, tanks and other closed or open vessels. Materials managed include water and sludge mixtures containing miscellaneous VOCs such as diesel, lube oil, and other waste oils.
3. Includes, but is not limited to:
  - i. repair/replacement of pumps, compressors, valves, pipes, flanges, transport lines, filters and screens in diesel oil, ammonia, lube oil, and gasoline service;
  - ii. off-line NO<sub>x</sub> control device maintenance, including maintenance of the aqueous ammonia systems associated with selective noncatalytic reduction (SNCR).

Date: February 4, 2021

Attachment B

Potential Permits By Rule for MSS Activities including but not limited to:

Source or Activity – PBR	Authorization
Routine Maintenance, Start-up and Shutdown of Facilities, and Temporary Maintenance Facilities	§ 106.263
Surface Coat Facility	§ 106.433
Soldering, Brazing, Welding	§ 106.227
Abrasive Blasting	§ 106.452
Solvent Cleaner, Parts Degreaser	§ 106.454
Bench-Scale Lab Equipment	§ 106.122
Hand-Held Machinery for Maintenance	§ 106.265
Drop Hammers or Hydraulic Presses for Forging or Metalworking	§ 106.317
Water-based Adhesive Mixers	§ 106.333
Wet Blast Cleaning	§ 106.451
Cooling Water Units	§ 106.371
Organic and Inorganic Liquid Loading and Unloading	§ 106.472
Portable and Emergency Engines and Turbines	§ 106.511

Other PBRs may be used, as applicable, to authorize MSS emissions for other specific equipment as appropriate.

Date: February 4, 2021

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 76044 and PSDTX1053

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)
FUG-NH <sub>3</sub> (5)	Aqueous Ammonia Fugitives	NH <sub>3</sub>	0.01	0.10
CFB-S1	Circulating Fluidized Bed Boiler (1,500 MMBtu/hr) - Standard Operations Hourly Limits	NO <sub>x</sub>	150.00	--
		SO <sub>2</sub>	1.17	--
		PM	11.4	--
		PM <sub>10</sub>	11.4	--
		PM <sub>2.5</sub>	11.4	--
		CO	165.00	--
		VOC	7.65	--
		H <sub>2</sub> SO <sub>4</sub>	0.04	--
		NH <sub>3</sub>	9.60	--
CFB-S2	Circulating Fluidized Bed Boiler (1,500 MMBtu/hr) - Standard Operations Hourly Limits	NO <sub>x</sub>	150.00	--
		SO <sub>2</sub>	1.17	--
		PM	11.4	--
		PM <sub>10</sub>	11.4	--
		PM <sub>2.5</sub>	11.4	--
		CO	165.00	--
		VOC	7.65	--
		H <sub>2</sub> SO <sub>4</sub>	0.04	--
		NH <sub>3</sub>	9.60	--

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CFB-S1	Circulating Fluidized Bed Boiler (1,500 MMBtu/hr) - Startup, Shutdown, and Optimization Activities Hourly Limits	NO <sub>x</sub>	239.00	--
		SO <sub>2</sub>	2900.00	--
		PM	71.00	--
		PM <sub>10</sub>	71.00	--
		PM <sub>2.5</sub>	71.00	--
		CO	207.00	--
		VOC	14.00	--
		NH <sub>3</sub>	11.60	--
CFB-S2	Circulating Fluidized Bed Boiler (1,500 MMBtu/hr) - Startup, Shutdown, and Optimization Activities Hourly Limits	NO <sub>x</sub>	239.00	--
		SO <sub>2</sub>	2900.00	--
		PM	71.00	--
		PM <sub>10</sub>	71.00	--
		PM <sub>2.5</sub>	71.00	--
		CO	207.00	--
		VOC	14.00	--
		NH <sub>3</sub>	11.60	--
CFB-S1	Circulating Fluidized Bed Boiler (1,500 MMBtu/hr) – Annual Limits	NO <sub>x</sub>	--	394.2
		SO <sub>2</sub>	--	5.12
		PM	--	49.93
		PM <sub>10</sub>	--	49.93
		PM <sub>2.5</sub>	--	49.93
		CO	--	657.0
		VOC	--	33.51
		H <sub>2</sub> SO <sub>4</sub>	--	0.2
		NH <sub>3</sub>	--	21.0

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CFB-S2	Circulating Fluidized Bed Boiler (1,500 MMBtu/hr) – Annual Limits	NO <sub>x</sub>	--	394.2
		SO <sub>2</sub>	--	5.12
		PM	--	49.93
		PM <sub>10</sub>	--	49.93
		PM <sub>2.5</sub>	--	49.93
		CO	--	657.0
		VOC	--	33.51
		H <sub>2</sub> SO <sub>4</sub>	--	0.2
		NH <sub>3</sub>	--	21.0
T-ACID	Acid Storage Tank	H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01
T-BASE	Base Storage Tank	Bases	<0.01	<0.01
CT-1/12	Cooling Towers 1-12	PM	3.36	14.52
		PM <sub>10</sub>	0.99	4.34
		PM <sub>2.5</sub>	0.07	0.29
		Chlorine Compounds (6)	0.01	<0.01
CBFUG-MSS	CFB-MNT (5)	PM	0.01	0.01
		PM <sub>10</sub>	0.01	0.01
		PM <sub>2.5</sub>	0.01	0.01
		VOC	1.06	0.04
		NH <sub>3</sub>	1.17	<0.01
FUG-NG (5)	FUG-NG	VOC	0.28	1.22
FUG-Cl2 (5)	FUG-Cl2	Cl <sub>2</sub>	0.02	0.06

(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

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CO	- carbon monoxide
H <sub>2</sub> SO <sub>4</sub>	- sulfuric acid
NH <sub>3</sub>	- ammonia
Cl <sub>2</sub>	- chlorine

- (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) Chlorine compound emissions consist of HOCl and HCl emissions

Date: February 4, 2021