

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Lower Colorado River Authority

AUTHORIZING THE OPERATION OF
Thomas C Ferguson Power Plant
Fossil Fuel Electric Power Generation

LOCATED AT
Llano County, Texas
Latitude 30° 33' 27" Longitude 98° 22' 23"
Regulated Entity Number: RN100219468

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, emission units and affected source listed in this permit. Operations of the site, emission units and affected source 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, emission units and affected source 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, emission units and affected source.

Permit No: 019 Issuance Date: April 22, 2026

For the Commission



Table of Contents

Section	Page
General Terms and Conditions	1
Special Terms and Conditions:	1
Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting.....	1
Additional Monitoring Requirements	7
New Source Review Authorization Requirements	7
Compliance Requirements.....	8
Protection of Stratospheric Ozone	9
Temporary Fuel Shortages (30 TAC § 112.15)	9
Permit Location	9
Permit Shield (30 TAC § 122.148)	9
Acid Rain Permit Requirements	10
Acid Rain Unit Exemptions	13
Cross-State Air Pollution Rule (CSAPR) Trading Program Requirements	14
Attachments	20
Applicable Requirements Summary.....	21
Additional Monitoring Requirements	30
Permit Shield.....	33
New Source Review Authorization References	35
Appendix A.....	38
Acronym List	39
Appendix B.....	40

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 as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.1090 which incorporates the 40 CFR Part 63 Subpart by reference.
2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
- A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
 - B. Title 30 TAC § 101.3 (relating to Circumvention)
 - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
 - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
 - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
 - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
 - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
 - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
 - I. Title 30 TAC § 101.222 (relating to Demonstrations)
 - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
- A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:
 - (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
 - (ii) Title 30 TAC § 111.111(a)(1)(E)
 - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
 - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive

ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

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

requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

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

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

- (i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)
- (iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
 - (1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.
 - (2) Records of all observations shall be maintained.
 - (3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to

condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

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

C. For visible emissions from all other sources not specified in 30 TAC § 111.111(a)(1), (4), or (7); the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(8)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(8)(B)(i) or (ii)
- (iii) For a source subject to 30 TAC § 111.111(a)(8)(A), complying with 30 TAC § 111.111(a)(8)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
 - (1) An observation of visible emissions from a source which is required to comply with 30 TAC § 111.111(a)(8)(A) shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter.
 - (2) Records of all observations shall be maintained.
 - (3) Visible emissions observations of sources 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 sources operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each source during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's

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

(4) Compliance Certification:

- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(8) and (a)(8)(A)
- (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(8)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- D. 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.
- E. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).
- F. 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)
- G. Outdoor burning, as stated in 30 TAC § 111.201, shall not be authorized unless the following requirements are satisfied:

- (i) Title 30 TAC § 111.205 (relating to Exception for Fire Training)
 - (ii) Title 30 TAC § 111.207 (relating to Exception for Recreation, Ceremony, Cooking, and Warmth)
 - (iii) Title 30 TAC § 111.219 (relating to General Requirements for Allowable Outdoor Burning)
 - (iv) Title 30 TAC § 111.221 (relating to Responsibility for Consequences of Outdoor Burning)
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 October 20, 2025 in the application for project 37698), 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)

Protection of Stratospheric Ozone

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

Temporary Fuel Shortages (30 TAC § 112.15)

- 13. The permit holder shall comply with the following 30 TAC Chapter 112 requirements:
 - A. Title 30 TAC § 112.15 (relating to Temporary Fuel Shortage Plan Filing Requirements)
 - B. Title 30 TAC § 112.16(a), (a)(1), and (a)(2)(B) - (C) (relating to Temporary Fuel Shortage Plan Operating Requirements)
 - C. Title 30 TAC § 112.17 (relating to Temporary Fuel Shortage Plan Notification Procedures)
 - D. Title 30 TAC § 112.18 (relating to Temporary Fuel Shortage Plan Reporting Requirements)

Permit Location

- 14. 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)

- 15. 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.

Acid Rain Permit Requirements

16. For units CT-1 and CT-2 (identified in the Certificate of Representation as units CT-1 and CT-2), located at the affected source identified by ORIS/Facility/Plant code 4937, the designated representative and the owner or operator, as applicable, shall comply with the following Acid Rain Permit requirements.

A. General Requirements

- (i) Under 30 TAC § 122.12(1) and 40 CFR Part 72, the Acid Rain Permit requirements contained here are a separable portion of the Federal Operating Permit (FOP) and have an independent public comment process which may be separate from, or combined with the FOP.
- (ii) The owner and operator shall comply with the requirements of 40 CFR Part 72 and 40 CFR Part 76. Any noncompliance with the Acid Rain Permit will be considered noncompliance with the FOP and may be subject to enforcement action.
- (iii) The owners and operators of the affected source shall operate the source and the unit in compliance with the requirements of this Acid Rain Permit and all other applicable State and federal requirements.
- (iv) The owners and operators of the affected source shall comply with the General Terms and Conditions of the FOP that incorporates this Acid Rain Permit.
- (v) The term for the Acid Rain permit shall commence with the issuance of the FOP that incorporates the Acid Rain permit and shall be run concurrent with the remainder of the term of the FOP. Renewal of the Acid Rain permit shall coincide with the renewal of the FOP that incorporates the Acid Rain permit and subsequent terms shall be no more than five years from the date of renewal of the FOP and run concurrent with the permit term of the FOP.

B. Monitoring Requirements

- (i) The owners and operators, and the designated representative, of the affected source and each affected unit at the source shall comply with the monitoring requirements contained in 40 CFR Part 75.
- (ii) The emissions measurements recorded and reported in accordance with 40 CFR Part 75 and any other credible evidence shall be used to determine compliance by the affected source with the acid rain emissions limitations and emissions reduction requirements for SO₂ and NO_x under the ARP.
- (iii) The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emission of other pollutants or other emissions characteristics at the unit under other applicable requirements of the FCAA Amendments (42 U.S.C. 7401, as amended November 15, 1990) and other terms and conditions of the operating permit for the source.

C. SO₂ emissions requirements

- (i) The owners and operators of each source and each affected unit at the source shall comply with the applicable acid rain emissions limitations for SO₂.
- (ii) As of the allowance transfer deadline the owners and operators of the affected source and each affected unit at the source shall hold, in the unit's compliance subaccount, allowances in an amount not less than the total annual emissions of SO₂ for the previous calendar year.
- (iii) Each ton of SO₂ emitted in excess of the acid rain emissions limitations for SO₂ shall constitute a separate violation of the FCAA amendments.
- (iv) An affected unit shall be subject to the requirements under (i) and (ii) of the SO₂ emissions requirements as follows:
 - (1) Starting January 1, 2000, an affected unit under 40 CFR § 72.6(a)(2); or
 - (2) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR Part 75, an affected unit under 40 CFR § 72.6(a)(3).
- (v) Allowances shall be held in, deducted from, or transferred into or among Allowance Tracking System accounts in accordance with the requirements of the ARP.
- (vi) An allowance shall not be deducted, for compliance with the requirements of this permit, in a calendar year before the year for which the allowance was allocated.
- (vii) An allowance allocated by the EPA Administrator or under the ARP is a limited authorization to emit SO₂ in accordance with the ARP. No provision of the ARP, Acid Rain permit application, this Acid Rain Permit, or an exemption under 40 CFR §§ 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (viii) An allowance allocated by the EPA Administrator under the ARP does not constitute a property right.

D. NO_x Emission Requirements

- (i) The owners and operators of the source and each affected unit at the source shall comply with the applicable acid rain emissions limitations for NO_x under 40 CFR Part 76.

E. Excess emissions requirements for SO₂ and NO_x.

- (i) The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77.
- (ii) If an affected source has excess emissions in any calendar year shall, as required by 40 CFR Part 77:
 - (1) Pay, without demand, the penalty required and pay, upon demand, the interest on that penalty.

- (2) Comply with the terms of an approved offset plan.

F. Recordkeeping and Reporting Requirements

- (i) Unless otherwise provided, the owners and operators of the affected source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the permitting authority or the EPA Administrator.
 - (1) The certificate of representation for the designated representative for the source and each affected unit and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR § 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative.
 - (2) All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping (rather than a five-year period cited in 30 TAC § 122.144), the 3-year period shall apply.
 - (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the ARP or relied upon for compliance certification.
 - (4) Copies of all documents used to complete an acid rain permit application and any other submission under the ARP or to demonstrate compliance with the requirements of the ARP.
- (ii) The designated representative of an affected source and each affected unit at the source shall submit the reports required under the ARP including those under 40 CFR Part 72, Subpart I and 40 CFR Part 75.

G. Liability

- (i) Any person who knowingly violates any requirement or prohibition of the ARP, a complete acid rain permit application, an acid rain permit, or a written exemption under 40 CFR §§ 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to FCAA § 113(c).
- (ii) Any person who knowingly makes a false, material statement in any record, submission, or report under the ARP shall be subject to criminal enforcement pursuant to FCAA § 113(c) and 18 U.S.C. 1001.
- (iii) No permit revision shall excuse any violation of the requirements of the ARP that occurs prior to the date that the revision takes effect.
- (iv) The affected source and each affected unit shall meet the requirements of the ARP contained in 40 CFR Parts 72 through 78.

- (v) Any provision of the ARP that applies to an affected source or the designated representative of an affected source shall also apply to the owners and operators of such source and of the affected units at the source.
 - (vi) Any provision of the ARP that applies to an affected unit (including a provision applicable to the DR of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR § 72.44 (Phase II repowering extension plans) and 40 CFR § 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR Part 75 (including 40 CFR §§ 75.16, 75.17, and 75.18), the owners and operators and the DR of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the DR and that is located at a source of which they are not owners or operators or the DR.
 - (vii) Each violation of a provision of 40 CFR Parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or DR of such source or unit, shall be a separate violation of the FCAA Amendments.
- H. Effect on other authorities. No provision of the ARP, an acid rain permit application, an acid rain permit, or an exemption under 40 CFR §§ 72.7 or 72.8 shall be construed as:
- (i) Except as expressly provided in Title IV of the FCAA Amendments, exempting or excluding the owners and operators and, to the extent applicable, the DR of an affected source or affected unit from compliance with any other provision of the FCAA Amendments, including the provisions of Title I of the FCAA Amendments relating to applicable National Ambient Air Quality Standards or State Implementation Plans.
 - (ii) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the FCAA Amendments.
 - (iii) Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding such state regulation, or limiting such state regulation, including any prudence review requirements under such state law.
 - (iv) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
 - (v) Interfering with or impairing any program for competitive bidding for power supply in a state in which such program is established.
- I. The number of SO₂ allowances allocated by the EPA in 40 CFR Part 73 is enforceable only by the EPA Administrator.

Acid Rain Unit Exemptions

17. As reference only information, the unit BOILER1 has received an acid rain unit exemption and is not incorporated into an Acid Rain Permit.

Cross-State Air Pollution Rule (CSAPR) Trading Program Requirements

18. For units CT-1 and CT-2 (identified in the Certificate of Representation as units CT-1 and CT-2), located at the site identified by Plant code/ORIS/Facility code 4937, the designated representative and the owner or operator, as applicable, shall comply with the following CSAPR requirements.
- A. General Requirements
- (i) The owners and operators of the CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall operate the source and the unit in compliance with the requirements of the CSAPR NO_x Ozone Season Group 2 Trading Program and all other applicable State and federal requirements.
 - (ii) The owners and operators of the CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall comply with the requirements of 40 CFR Part 97, Subpart EEEEE for CSAPR NO_x Ozone Season Group 2 Trading Program, and with the General Terms and Conditions of the Federal Operating Permit (FOP) that incorporates the CSAPR requirements.
- B. Description of CSAPR Monitoring Provisions
- (i) The CSAPR subject unit(s), and the unit-specific monitoring provisions at this source, are identified in the following paragraph(s). These unit(s) are subject to the requirements for the CSAPR NO_x Ozone Season Group 2 Trading Program.
 - (1) For units CT-1 and CT-2, the owners and operators shall comply with the continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR Part 75, Subpart H for NO_x, and with the excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR Part 75, Appendix D for heat input.
 - (ii) The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR §§ 97.830 through 97.835 (CSAPR NO_x Ozone Season Group 2 Trading Program). The monitoring, recordkeeping and reporting requirements applicable to each unit are included below in the standard conditions for the applicable CSAPR trading program.
 - (iii) Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR §§ 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA's website at <https://www.epa.gov/airmarkets/clean-air-markets-monitoring-plans-part-75-sources>.
 - (iv) Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR Part 75, Subpart E and 40 CFR § 75.66 and § 97.835 (CSAPR NO_x Ozone Season Group 2 Trading Program). The Administrator's response approving or disapproving any petition for an alternative monitoring system is available on the EPA's website at <https://www.epa.gov/airmarkets/part-75-petition-responses>.

- (v) Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR §§ 97.830 through 97.834 (CSAPR NO_x Ozone Season Group 2 Trading Program) must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR § 75.66 and § 97.835 (CSAPR NO_x Ozone Season Group 2 Trading Program). The Administrator's response approving or disapproving any petition for an alternative to a monitoring, recordkeeping, or reporting requirement is available on the EPA's website at <https://www.epa.gov/airmarkets/part-75-petition-responses>.
- (vi) The descriptions of monitoring applicable to the unit(s) included above meet the requirement of 40 CFR §§ 97.830 through 97.834 (CSAPR NO_x Ozone Season Group 2 Trading Program), and therefore procedures for minor permit revisions, in accordance with 30 TAC § 122.217, may be used to add or change this unit's monitoring system description.

19. CSAPR NO_x Ozone Season Group 2 Trading Program Requirements (40 CFR § 97.806)

A. Designated representative requirements

- (i) The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR §§ 97.813 through 97.818.

B. Emissions monitoring, reporting, and recordkeeping requirements

- (i) The owners and operators, and the designated representative, of each CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR § 97.830 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), § 97.831 (initial monitoring system certification and recertification procedures), § 97.832 (monitoring system out-of-control periods), § 97.833 (notifications concerning monitoring), § 97.834 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and § 97.835 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
- (ii) The emissions data determined in accordance with 40 CFR § 97.830 through § 97.835 and any other credible evidence shall be used to calculate allocations of CSAPR NO_x Ozone Season Group 2 allowances under 40 CFR §§ 97.811(a)(2) and (b) and § 97.812 and to determine compliance with the CSAPR NO_x Ozone Season Group 2 emissions limitation and assurance provisions under paragraph C. below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR §§ 97.830 through 97.835 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

C. NO_x emissions requirements

- (i) CSAPR NO_x Ozone Season Group 2 emissions limitation

- (1) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall hold, in the source's compliance account, CSAPR NO_x Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR § 97.824(a) in an amount not less than the tons of total NO_x emissions for such control period from all CSAPR NO_x Ozone Season Group 2 units at the source.
- (2) If total NO_x emissions during a control period in a given year from the CSAPR NO_x Ozone Season Group 2 units at a CSAPR NO_x Ozone Season Group 2 source are in excess of the CSAPR NO_x Ozone Season Group 2 emissions limitation set forth in paragraph C.(i)(1) above, then:
 - (a) The owners and operators of the source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall hold the CSAPR NO_x Ozone Season Group 2 allowances required for deduction under 40 CFR § 97.824(d); and
 - (b) The owners and operators of the source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart EEEEE and the Clean Air Act.

(ii) CSAPR NO_x Ozone Season Group 2 assurance provisions

- (1) If total NO_x emissions during a control period in a given year from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO_x emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO_x Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR § 97.825(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR § 97.825(b), of multiplying -
 - (a) The quotient of the amount by which the common designated representative's share of such NO_x emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO_x emissions exceeds the respective common designated representative's assurance level; and

- (b) The amount by which total NO_x emissions from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state for such control period exceed the state assurance level.
 - (2) The owners and operators shall hold the CSAPR NO_x Ozone Season Group 2 allowances required under paragraph C.(ii)(1) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
 - (3) Total NO_x emissions from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state during a control period in a given year exceed the state assurance level if such total NO_x emissions exceed the sum, for such control period, of the state NO_x Ozone Season Group 2 trading budget under 40 CFR § 97.810(a) and the state's variability limit under 40 CFR § 97.810(b).
 - (4) It shall not be a violation of 40 CFR Part 97, Subpart EEEEE or of the Clean Air Act if total NO_x emissions from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NO_x emissions from the CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state during a control period exceeds the common designated representative's assurance level.
 - (5) To the extent the owners and operators fail to hold CSAPR NO_x Ozone Season Group 2 allowances for a control period in a given year in accordance with paragraphs C.(ii)(1) through (3) above,
 - (a) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
 - (b) Each CSAPR NO_x Ozone Season Group 2 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs C.(ii)(1) through (3) above and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart EEEEE and the Clean Air Act.
- (iii) Compliance periods
- (1) A CSAPR NO_x Ozone Season Group 2 unit shall be subject to the requirements under paragraph C.(i) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR § 97.830(b) and for each control period thereafter.
 - (2) A CSAPR NO_x Ozone Season Group 2 unit shall be subject to the requirements under paragraph C.(ii) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR § 97.830(b) and for each control period thereafter.

- (iv) Vintage of allowances held for compliance
 - (1) A CSAPR NO_x Ozone Season Group 2 allowance held for compliance with the requirements under paragraph C.(i)(1) above for a control period in a given year must be a CSAPR NO_x Ozone Season Group 2 allowance that was allocated for such control period or a control period in a prior year.
 - (2) A CSAPR NO_x Ozone Season Group 2 allowance held for compliance with the requirements under paragraphs C.(i)(2)(a) and (ii)(1) through (3) above for a control period in a given year must be a CSAPR NO_x Ozone Season Group 2 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- (v) Allowance Management System requirements. Each CSAPR NO_x Ozone Season Group 2 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart EEEEE.
- (vi) Limited authorization. A CSAPR NO_x Ozone Season Group 2 allowance is a limited authorization to emit one ton of NO_x during the control period in one year. Such authorization is limited in its use and duration as follows:
 - (1) Such authorization shall only be used in accordance with the CSAPR NO_x Ozone Season Group 2 Trading Program; and
 - (2) Notwithstanding any other provision of 40 CFR Part 97, Subpart EEEEE, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
- (vii) Property right. A CSAPR NO_x Ozone Season Group 2 allowance does not constitute a property right.

D. FOP revision requirements

- (i) No FOP revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_x Ozone Season Group 2 allowances in accordance with 40 CFR Part 97, Subpart EEEEE.
- (ii) This FOP incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR §§ 97.830 through 97.835, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR Part 75, subpart H), an excepted monitoring system (pursuant to 40 CFR Part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR § 75.19), and an alternative monitoring system (pursuant to 40 CFR Part 75, subpart E). Therefore the Description of CSAPR Monitoring Provisions for CSAPR subject unit(s) may be added to, or changed, in this FOP using procedures for minor permit revisions in accordance with 30 TAC § 122.217.

E. Additional recordkeeping and reporting requirements

- (i) Unless otherwise provided, the owners and operators of each CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
 - (1) The certificate of representation under 40 CFR § 97.816 for the designated representative for the source and each CSAPR NO_x Ozone Season Group 2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR § 97.816 changing the designated representative.
 - (2) All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart EEEEE.
 - (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO_x Ozone Season Group 2 Trading Program.
- (ii) The designated representative of a CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall make all submissions required under the CSAPR NO_x Ozone Season Group 2 Trading Program, except as provided in 40 CFR § 97.818. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under 30 TAC § 122.165.

F. Liability

- (i) Any provision of the CSAPR NO_x Ozone Season Group 2 Trading Program that applies to a CSAPR NO_x Ozone Season Group 2 source or the designated representative of a CSAPR NO_x Ozone Season Group 2 source shall also apply to the owners and operators of such source and of the CSAPR NO_x Ozone Season Group 2 units at the source.
- (ii) Any provision of the CSAPR NO_x Ozone Season Group 2 Trading Program that applies to a CSAPR NO_x Ozone Season Group 2 unit or the designated representative of a CSAPR NO_x Ozone Season Group 2 unit shall also apply to the owners and operators of such unit.

G. Effect on other authorities

- (i) No provision of the CSAPR NO_x Ozone Season Group 2 Trading Program or exemption under 40 CFR § 97.805 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_x Ozone Season Group 2 source or CSAPR NO_x Ozone Season Group 2 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary **22**

Applicable Requirements Summary **24**

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
EMGEN1-STK	SRIC ENGINES	N/A	60IIII	40 CFR Part 60, Subpart IIII	No changing attributes.
EMGEN1-STK	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
FWP1-STK	SRIC ENGINES	N/A	60IIII	40 CFR Part 60, Subpart IIII	No changing attributes.
FWP1-STK	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-CT	STATIONARY TURBINES	CT-1, CT-2	60KKKK-01	40 CFR Part 60, Subpart KKKK	75% of Peak = The combustion turbine operates at less than 75% of peak load or at temperatures less than zero degrees F., 30 MW = The combustion turbine has an output of greater than 30 MW., Fuel Quality = Fuel is demonstrated not to exceed emission standard by representative fuel sampling data.
GRP-CT	STATIONARY TURBINES	CT-1, CT-2	60KKKK-02	40 CFR Part 60, Subpart KKKK	75% of Peak = The combustion turbine operates at less than 75% of peak load or at temperatures less than zero degrees F., 30 MW = The combustion turbine has an output of greater than 30 MW., Fuel Quality = Fuel is demonstrated not to exceed emission standard by characteristics in purchase contract or tariff sheet.
GRP-CT	STATIONARY TURBINES	CT-1, CT-2	60KKKK-03	40 CFR Part 60, Subpart KKKK	75% of Peak = The combustion turbine does not operate at less than 75% of peak load or at temperatures less than zero degrees F., Fuel Quality = Fuel is demonstrated not to exceed emission standard by representative fuel sampling data.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
GRP-CT	STATIONARY TURBINES	CT-1, CT-2	60KKKK-04	40 CFR Part 60, Subpart KKKK	75% of Peak = The combustion turbine does not operate at less than 75% of peak load or at temperatures less than zero degrees F., Fuel Quality = Fuel is demonstrated not to exceed emission standard by characteristics in purchase contract or tariff sheet.
GRP-STK	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	U1-STK, U2-STK	R1115-GRPSTK	30 TAC Chapter 111, Nonagricultural Processes	No changing attributes.
GRP-STK	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	U1-STK, U2-STK	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)
EMGEN1-STK	EU	60III	NO _x	40 CFR Part 60, Subpart III	[G]§ 60.4205(d)(2) § 60.4206 § 60.4207(d) § 60.4211(d) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder and was installed on or after 01/01/2012 must comply with the following NO _x emission limits: 14.4 g/KW-hr when maximum engine speed is less than 130 rpm, 44.0 x N-0.23 when maximum engine speed is at least 130 but less than 2000 rpm, and 7.7 g/KW-hr when maximum engine speed is 2000 rpm or more.	§ 60.4211(d)(1) § 60.4213(a) § 60.4213(b) § 60.4213(c) § 60.4213(e)	[G]§ 60.4211(d)(2)	[G]§ 60.4211(d)(2) [G]§ 60.4214(d)
EMGEN1-STK	EU	60III	PM	40 CFR Part 60, Subpart III	§ 60.4205(d)(3) § 60.4206 § 60.4207(d) § 60.4211(d) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must comply with a PM emission limit of 0.40 g/KW-hr.	§ 60.4211(d)(1) § 60.4213(a) § 60.4213(b) § 60.4213(c) § 60.4213(f)	[G]§ 60.4211(d)(2)	[G]§ 60.4211(d)(2) [G]§ 60.4214(d)
EMGEN1-STK	EU	63ZZZZ	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart III, for compression ignition engines or 40 CFR part 60 subpart JJJJ, 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.			
FWP1-STK	EU	60III	NMHC and NO _x	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 NMHC+NO _x emission limit of 4.0 g/KW-hr, as listed in Table 4 to this subpart.	None	None	None
FWP1-STK	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.	None	None	None
FWP1-STK	EU	63ZZZZ	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements	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)
						of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.			
GRP-CT	EU	60KKKK-01	NO _x	40 CFR Part 60, Subpart KKKK	§ 60.4320(a)-Table 1 § 60.4320(a) § 60.4320(b) § 60.4333(a) § 60.4333(b)(1) § 60.4335(b)(1) § 60.4335(b)(2) § 60.4335(b)(3) [G]§ 60.4345	Turbines operating at less than 75 percent of peak load, or turbines operating at temperatures less than 0 degrees F with greater than 30 MW output must meet the nitrogen oxides emission standard of 590 ng/J of useful output (4.7 lb/MWh).	§ 60.4333(b)(1) § 60.4335(b)(1) § 60.4335(b)(2) § 60.4335(b)(3) [G]§ 60.4345 § 60.4350(a) § 60.4350(b) § 60.4350(c) § 60.4350(d) § 60.4350(e) § 60.4350(f) § 60.4350(f)(2) § 60.4350(h) [G]§ 60.4400(a) § 60.4400(b) § 60.4400(b)(1) § 60.4400(b)(4) § 60.4400(b)(5) § 60.4400(b)(6) [G]§ 60.4405	[G]§ 60.4345 § 60.4350(b)	[G]§ 60.4345 § 60.4350(d) § 60.4375(a) § 60.4380 [G]§ 60.4380(b) § 60.4395
GRP-CT	EU	60KKKK-01	SO ₂	40 CFR Part 60, Subpart KKKK	§ 60.4330(a)(2) § 60.4333(a)	You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO ₂ /J (0.060 lb SO ₂ /MMBtu) heat input. If your turbine	§ 60.4365 § 60.4365(b) § 60.4415(a) § 60.4415(a)(2) § 60.4415(a)(2)(ii)	§ 60.4365(b)	§ 60.4375(a)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						simultaneously fires multiple fuels, each fuel must meet this requirement.			
GRP-CT	EU	60KKKK-02	NO _x	40 CFR Part 60, Subpart KKKK	§ 60.4320(a)-Table 1 § 60.4320(a) § 60.4320(b) § 60.4333(a) § 60.4333(b)(1) § 60.4335(b)(1) § 60.4335(b)(2) § 60.4335(b)(3) [G]§ 60.4345	Turbines operating at less than 75 percent of peak load, or turbines operating at temperatures less than 0 degrees F with greater than 30 MW output must meet the nitrogen oxides emission standard of 590 ng/J of useful output (4.7 lb/MWh).	§ 60.4333(b)(1) § 60.4335(b)(1) § 60.4335(b)(2) § 60.4335(b)(3) [G]§ 60.4345 § 60.4350(a) § 60.4350(b) § 60.4350(c) § 60.4350(d) § 60.4350(e) § 60.4350(f) § 60.4350(f)(2) § 60.4350(h) [G]§ 60.4400(a) § 60.4400(b) § 60.4400(b)(1) § 60.4400(b)(4) § 60.4400(b)(5) § 60.4400(b)(6) [G]§ 60.4405	[G]§ 60.4345 § 60.4350(b)	[G]§ 60.4345 § 60.4350(d) § 60.4375(a) § 60.4380 [G]§ 60.4380(b) § 60.4395
GRP-CT	EU	60KKKK-02	SO ₂	40 CFR Part 60, Subpart KKKK	§ 60.4330(a)(2) § 60.4333(a)	You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO ₂ /J (0.060 lb SO ₂ /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.	§ 60.4365 § 60.4365(a) § 60.4415(a) § 60.4415(a)(2) § 60.4415(a)(2)(ii)	§ 60.4365(a)	§ 60.4375(a)
GRP-CT	EU	60KKKK-03	NO _x	40 CFR Part 60, Subpart KKKK	§ 60.4320(a)-Table 1 § 60.4320(a) § 60.4320(b)	New, modified, or reconstructed turbine firing natural gas with a heat input at peak load > 850 MMBtu/h	§ 60.4333(b)(1) § 60.4335(b)(1) § 60.4335(b)(2) § 60.4335(b)(3)	[G]§ 60.4345 § 60.4350(b)	[G]§ 60.4345 § 60.4350(d) § 60.4375(a) § 60.4380

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.4325 § 60.4333(a) § 60.4333(b)(1) § 60.4335(b)(1) § 60.4335(b)(2) § 60.4335(b)(3) [G]§ 60.4345	must meet the nitrogen oxides emission standard of 54 ng/J of useful output (0.43 lb/MWh).	[G]§ 60.4345 § 60.4350(a) § 60.4350(b) § 60.4350(c) § 60.4350(d) § 60.4350(e) § 60.4350(f) § 60.4350(f)(2) § 60.4350(h) [G]§ 60.4400(a) § 60.4400(b) § 60.4400(b)(1) § 60.4400(b)(4) § 60.4400(b)(5) § 60.4400(b)(6) [G]§ 60.4405		[G]§ 60.4380(b) § 60.4395
GRP-CT	EU	60KKKK-03	SO ₂	40 CFR Part 60, Subpart KKKK	§ 60.4330(a)(2) § 60.4333(a)	You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO ₂ /J (0.060 lb SO ₂ /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.	§ 60.4365 § 60.4365(b) § 60.4415(a) § 60.4415(a)(2) § 60.4415(a)(2)(ii)	§ 60.4365(b)	§ 60.4375(a)
GRP-CT	EU	60KKKK-04	NO _x	40 CFR Part 60, Subpart KKKK	§ 60.4320(a)-Table 1 § 60.4320(a) § 60.4320(b) § 60.4325 § 60.4333(a) § 60.4333(b)(1) § 60.4335(b)(1) § 60.4335(b)(2) § 60.4335(b)(3) [G]§ 60.4345	New, modified, or reconstructed turbine firing natural gas with a heat input at peak load > 850 MMBtu/h must meet the nitrogen oxides emission standard of 54 ng/J of useful output (0.43 lb/MWh).	§ 60.4333(b)(1) § 60.4335(b)(1) § 60.4335(b)(2) § 60.4335(b)(3) [G]§ 60.4345 § 60.4350(a) § 60.4350(b) § 60.4350(c) § 60.4350(d) § 60.4350(e) § 60.4350(f)	[G]§ 60.4345 § 60.4350(b)	[G]§ 60.4345 § 60.4350(d) § 60.4375(a) § 60.4380 [G]§ 60.4380(b) § 60.4395

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 60.4350(f)(2) § 60.4350(h) [G]§ 60.4400(a) § 60.4400(b) § 60.4400(b)(1) § 60.4400(b)(4) § 60.4400(b)(5) § 60.4400(b)(6) [G]§ 60.4405		
GRP-CT	EU	60KKKK-04	SO ₂	40 CFR Part 60, Subpart KKKK	§ 60.4330(a)(2) § 60.4333(a)	You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO ₂ /J (0.060 lb SO ₂ /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.	§ 60.4365 § 60.4365(a) § 60.4415(a) § 60.4415(a)(2) § 60.4415(a)(2)(ii)	§ 60.4365(a)	§ 60.4375(a)
GRP-STK	EP	R1115-GRPSTK	PM	30 TAC Chapter 111, Nonagricultural Processes	§ 111.151(a) § 111.151(c)	No person may cause, suffer, allow, or permit emissions of particulate matter from any source to exceed the allowable rates specified in Table 1 as follows, except as provided by §111.153 of this title (relating to Emissions Limits for Steam Generators).	** See Periodic Monitoring Summary	None	None
GRP-STK	EP	R1111	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

Additional Monitoring Requirements

Periodic Monitoring Summary 31

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-STK	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Nonagricultural Processes	SOP Index No.: R1115-GRPSTK
Pollutant: PM	Main Standard: § 111.151(a)
Monitoring Information	
Indicator: Fuel Type	
Minimum Frequency: Annually or at any time an alternate fuel is used	
Averaging Period: N/A	
Deviation Limit: If alternative fuel is fired for > 24 consecutive hours, report as a deviation, or conduct observation using Test Method 22. Report as a deviation if visible emissions are observed using Test Method 22 and opacity > 15% using Test Method 9.	
<p>Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, for a period greater than or equal to 24 consecutive hours it shall be considered and reported as a deviation or the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are observed. Any time an alternate fuel is fired for a period of greater than 7 consecutive days then visible emissions observations will be conducted no less than once per week. Documentation of all observations shall be maintained. If visible emissions are present during the firing of an alternate fuel, the permit holder shall either list this occurrence as a deviation or the permit holder may determine the opacity consistent with Test Method 9. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.</p>	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-STK	
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
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Fuel Type	
Minimum Frequency: Annually or at any time an alternate fuel is used	
Averaging Period: N/A	
Deviation Limit: If alternative fuel is fired for > 24 consecutive hours, report as a deviation, or conduct observation using Test Method 22. Report as a deviation if visible emissions are observed using Test Method 22 and opacity > 15% using Test Method 9.	
<p>Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, for a period greater than or equal to 24 consecutive hours it shall be considered and reported as a deviation or the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are observed. Any time an alternate fuel is fired for a period of greater than 7 consecutive days then visible emissions observations will be conducted no less than once per week. Documentation of all observations shall be maintained. If visible emissions are present during the firing of an alternate fuel, the permit holder shall either list this occurrence as a deviation or the permit holder may determine the opacity consistent with Test Method 9. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.</p>	

Permit Shield

Permit Shield 34

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
GRP-CT	CT-1, CT-2	40 CFR Part 60, Subpart GG	Combustion turbines constructed after 02/18/2005 and are subject to NSPS KKKK.
GRP-CT	CT-1, CT-2	40 CFR Part 63, Subpart YYYY	Source is not major for HAPs.
GRP-TANK	DSL-TK1, DSL-TK2	40 CFR Part 60, Subpart Kb	Tanks capacities are less than 19,800 gallons.
PAINTING	N/A	40 CFR Part 63, Subpart MMMM	The site is not a major source of hazardous air pollutants.

New Source Review Authorization References

New Source Review Authorization References 36

New Source Review Authorization References by Emission Unit..... 37

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.: GHGPSDTX1	Issuance Date: 11/26/2019
PSD Permit No.: PSDTX1244	Issuance Date: 08/29/2024
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.: 93938	Issuance Date: 08/29/2024
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 75	Version No./Date: 06/07/1996
Number: 102	Version No./Date: 06/07/1996
Number: 106.227	Version No./Date: 09/04/2000
Number: 106.244	Version No./Date: 09/04/2000
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.265	Version No./Date: 09/04/2000
Number: 106.352	Version No./Date: 11/22/2012
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.372	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.473	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 106.532	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**
CT-1	COMBUSTION TURBINE 1	93938, GHGPSDTX1, PSDTX1244
CT-2	COMBUSTION TURBINE 2	93938, GHGPSDTX1, PSDTX1244
CT1GSOV-VNT	COMBUSTION TURBINE 1 SEAL OIL VENT	93938, PSDTX1244
CT1LOV-VNT	COMBUSTION TURBINE 1 LUBE OIL VAPOR EXTRACTOR VENT	93938, PSDTX1244
CT2GSOV-VNT	COMBUSTION TURBINE 2 SEAL OIL VENT	93938, PSDTX1244
CT2LOV-VNT	COMBUSTION TURBINE 2 LUBE OIL VAPOR EXTRACTOR VENT	93938, PSDTX1244
DSL-TK1	DIESEL TANK 1	93938, PSDTX1244
DSL-TK2	DIESEL TANK 2	93938, PSDTX1244
EMGEN1-STK	EMERGENCY GENERATOR	GHGPSDTX1, 106.511/09/04/2000
FWP1-STK	FIRE WATER PUMP	93938, GHGPSDTX1, PSDTX1244
OUT-BLAST	ENCLOSED ABRASIVE BLASTING, OUTSIDE BLAST CLEANING	102/06/07/1996 [33640]
PAINTING	MAINTENANCE PAINTING OPERATIONS	106.263/11/01/2001
ST1LOV-VNT	STEAM TURBINE LUBE OIL VAPOR EXTRACTOR VENT	93938, PSDTX1244
ST1SOV-VNT	STEAM TURBINE SEAL OIL VENT	93938, PSDTX1244
SURF-COAT	SURFACE COATING	75/06/07/1996 [33640]
U1-STK	COMBUSTION TURBINE 1 STACK	93938, GHGPSDTX1, PSDTX1244
U2-STK	COMBUSTION TURBINE 2 STACK	93938, GHGPSDTX1, PSDTX1244

**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 39

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 ₂ 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 _x	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PEMS	predictive emissions monitoring system
PM	particulate matter
ppmv	parts per million by volume
PRO	process unit
PSD	prevention of significant deterioration
psia	pounds per square inch absolute
RO	Responsible Official
SIP	state implementation plan
SO ₂	sulfur dioxide
TCEQ	Texas Commission on Environmental Quality
TSP	total suspended particulate
TVP	true vapor pressure
U.S.C.	United States Code
VOC	volatile organic compound

Appendix B

Major NSR Summary Table 41

Major NSR Summary Table

Permit Numbers: 93938 and PSDTX1244					Issuance Date: August 29, 2024		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
U1-STK	GE 7FA (~ 195 MW)	NO _x (6)	18.80	73.50	2, 7, 8, 16, 17, 18, 19	2, 8, 16, 17, 18, 19, 20, 21, 23	2, 16, 17, 18, 22, 23
		NO _x (MSS) (6)	160.00	--			
		CO (6)	16.82	176.30			
		CO (MSS) (6)	1800.00	--			
		VOC	4.82	33.91			
		VOC (MSS)	69.98	--			
		SO ₂	27.07	10.87			
		PM	33.43	73.10			
		PM ₁₀	33.43	73.10			
		PM _{2.5}	33.43	73.10			
		H ₂ SO ₄	13.68	5.49			
NH ₃	17.89	71.84					
U2-STK	GE 7FA (~ 195 MW)	NO _x (6)	18.80	73.50	2, 7, 8, 16, 17, 18, 19	2, 8, 16, 17, 18, 19, 20,	2, 16, 17, 18, 22, 23
		NO _x (MSS) (6)	160.00	--			
		CO (6)	16.82	176.30			
		CO (MSS) (6)	1800.00	--			

Major NSR Summary Table

Permit Numbers: 93938 and PSDTX1244					Issuance Date: August 29, 2024		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		VOC	4.82	33.91		21, 23	
		VOC (MSS)	69.98	--			
		SO ₂	27.07	10.87			
		PM	33.43	73.10			
		PM ₁₀	33.43	73.10			
		PM _{2.5}	33.43	73.10			
		H ₂ SO ₄	13.68	5.49			
		NH ₃	17.89	71.84			

Major NSR Summary Table

Permit Numbers: 93938 and PSDTX1244					Issuance Date: August 29, 2024		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM	0.09	0.40			
		PM ₁₀	0.09	0.40			
		PM _{2.5}	0.09	0.40			
ST1LOV-VNT	Steam Turbine 1 Lube Oil Vent	VOC	0.09	0.40		20, 21	
		PM	0.09	0.40			
		PM ₁₀	0.09	0.40			
		PM _{2.5}	0.09	0.40			
CT1GSOV-VNT	Combustion Turbine 1 Generator Seal Oil Vent	VOC	0.09	0.40		20, 21	
CT2GSOV-VNT	Combustion Turbine 2 Generator Seal Oil Vent	VOC	0.09	0.40		20, 21	
ST1SOV-VNT	Steam Turbine Generator 1 Seal Oil Vent	VOC	0.09	0.40		20, 21	
DSL-TK1	Diesel Tank 1	VOC	0.07	<0.01		20	
DSL-TK2	Diesel Tank 2	VOC	0.02	<0.01		20	
FWP1-STK	Fire Water Pump	NO _x	3.81	0.19	2, 3, 7, 8	2, 3, 6, 20, 21	2, 3
		CO	4.12	0.21			

Major NSR Summary Table

Permit Numbers: 93938 and PSDTX1244					Issuance Date: August 29, 2024		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		VOC	0.27	0.01			
		PM	0.20	0.01			
		PM ₁₀	0.20	0.01			
		PM _{2.5}	0.20	0.01			
		SO ₂	<0.01	<0.01			
TURB-MSS	ILE Turbine Maintenance Fugitives (5)	PM	0.09	0.02	13, 14	13, 20, 21	
		PM ₁₀	0.09	0.02			
		PM _{2.5}	<0.01	<0.01			
		NH ₃	<0.01	<0.01			
NG-FUG	Natural Gas Fugitives (5)	VOC	0.03	0.12		20	
NH ₃ -FUG	Ammonia Fugitives (5)	NH ₃	0.12	0.51	10	20, 21	
GASVENT	Natural Gas Venting	VOC	9.72	0.64	13	20, 21	
MISC-MSS	Planned site-wide MSS activities (5)	VOC	0.55	0.02	13	20, 21	
		NO _x	<0.01	<0.01			
		CO	<0.01	<0.01			

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) VOC
 - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- NO_x
 - total oxides of nitrogen
- SO₂
 - sulfur dioxide
- PM
 - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
- PM₁₀
 - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
- PM_{2.5}
 - particulate matter equal to or less than 2.5 microns in diameter
- CO
 - carbon monoxide
- H₂SO₄
 - sulfuric acid
- NH₃
 - ammonia
- (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) For each pollutant whose emissions during planned MSS activities are measured using a CEMS, the MSS lb/hr limits apply only during each clock hour that includes one or more minutes of MSS activities. During all other clock hours, the normal lb/hr limits apply.

Major NSR Summary Table

Permit Number: GHGPSDTX1					Issuance Date: November 26, 2019		
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
U1-STK	CT-1100	N ₂ O (5)	-	2	II.B.1., II.B.2., II.B.3., V	II.B.3, III.A, III.B, III.C, III.D, III.E, III.H	II.B.3., III.E, III.F, III.G, V.B
		CH ₄ (5)	-	17			
		CO ₂ (5)	-	908,958			
		CO ₂ e	-	909,979			
U2-STK	CT-2100	N ₂ O (5)	-	2	II.B.1., II.B.2., II.B.3., V	II.B.3., III.A, III.B, III.C, III.D, III.E, III.H	II.B.3., III.E, III.F, III.G, V.B
		CH ₄ (5)	-	17			
		CO ₂ (5)	-	908,958			
		CO ₂ e	-	909,979			
NG-FUG	Fugitive Natural Gas	CH ₄ (5)(6)	-	16	II.D.1.	II.D.1., III.A, III.B, III.C, III.D, III.E, III.H	III.E, III.F, III.G
		CO ₂ e	-	405			
EMERGEN1-STK	Emergency Generator	CO ₂ (5)(7)	-	695	II.C.1.	II.D.1., III.A, III.B, III.C, III.D, III.E, III.H	III.E, III.F, III.G
		CO ₂ e	-	697			
FWP1-STK	Fire Water Pump	CO ₂ (5)(7)	-	161	II.C.1.	II.D.1., III.A, III.B, III.C, III.D, III.E, III.H	III.E, III.F, III.G
		CO ₂ e	-	161			
SF ₆ -FUG	SF ₆ Insulated Electrical Equipment	SF ₆ (6)	-	<1	II.D.1.	II.D.1., III.A, III.B, III.C, III.D, III.E, III.H	III.E, III.F, III.G
		CO ₂ e	-	137			

Major NSR Summary Table

Permit Number: GHGPSDTX1					Issuance Date: November 26, 2019		
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
U1-STK	CT-1100 SU/SD	CO ₂ e	153,392.10	-	II.B.4.	II.B.4., III.A, III.B, III.C, III.D, III.E, III.H	II.B.4., III.A, III.B, III.C, III.D, III.E, III.H
		CH ₄ (CO ₂ e)	353.30	-			
		N ₂ O(CO ₂ e)	521.60	-			
U2-STK	CT-2100 SU/SD	CO ₂ e	153,392.10	-	II.B.4.	II.B.4., III.A, III.B, III.C, III.D, III.E, III.H	II.B.4., III.A, III.B, III.C, III.D, III.E, III.H
		CH ₄ (CO ₂ e)	353.30	-			
		N ₂ O(CO ₂ e)	521.60	-			

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) N₂O - nitrous oxide
 CH₄ - methane
 CO₂ - carbon dioxide
 SF₆ - sulfur hexafluoride
 CO₂e - carbon dioxide equivalents based on the following Global Warming Potentials (1/2015): CO₂ (1), N₂O (298), CH₄ (25), SF₆ (22,800).
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
 Only the annual limits associated with CTG operations include both routine and MSS.
- (5) Emission rate is given for informational purposes only and does not constitute enforceable limit.
- (6) Because the emissions from this unit are calculated to be over 96% methane (CH₄), the remaining pollutant emission (CO₂) is not presented in the table.
- (7) Because the emissions from this unit are calculated to be over 99.9% carbon dioxide (CO₂), the remaining pollutant emissions (CH₄ and N₂O) are not presented in the table.



Texas Commission on Environmental Quality Air Quality Permit

A Permit Is Hereby Issued To
Lower Colorado River Authority
Authorizing the Construction and Operation of
Thomas C Ferguson Power Plant
Located at Horseshoe Bay, Llano County, Texas
Latitude 30.5575 Longitude -98.373055

Permits: 93938, PSDTX1244, and GHGPSDTX1

Revision Date: August 29, 2024

Expiration Date: July 29, 2031



For the Commission

- Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)]¹
- 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]
- Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
- Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
- 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)]
- 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)]
- 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)]¹
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.¹

¹ 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
°F = Temperature in degrees Fahrenheit
°K = Temperature in degrees Kelvin
µg = microgram
µg/m³ = microgram per cubic meter
acfm = actual cubic feet per minute
AMOC = alternate means of control
AOS = alternative operating scenario
AP-42 = Air Pollutant Emission Factors, 5th edition
APD = Air Permits Division
API = American Petroleum Institute
APWL = air pollutant watch list
BPA = Beaumont/ Port Arthur
BACT = best available control technology
BAE = baseline actual emissions
bbl = barrel
bbl/day = barrel per day
bhp = brake horsepower
BMP = best management practices
Btu = British thermal unit
Btu/scf = British thermal unit per standard cubic foot or feet
CAA = Clean Air Act
CAM = compliance-assurance monitoring
CEMS = continuous emissions monitoring systems
cfm = cubic feet (per) minute
CFR = Code of Federal Regulations
CN = customer ID number
CNG = compressed natural gas
CO = carbon monoxide
COMS = continuous opacity monitoring system
CPMS = continuous parametric monitoring system
DFW = Dallas/ Fort Worth (Metroplex)
DE = destruction efficiency
DRE = destruction and removal efficiency
dscf = dry standard cubic foot or feet
dscfm = dry standard cubic foot or feet per minute
ED = (TCEQ) Executive Director
EF = emissions factor
EFR = external floating roof tank
EGU = electric generating unit
EI = Emissions Inventory
ELP = El Paso
EPA = (United States) Environmental Protection Agency
EPN = emission point number
ESL = effects screening level
ESP = electrostatic precipitator
FCAA = Federal Clean Air Act
FCCU = fluid catalytic cracking unit
FID = flame ionization detector
FIN = facility identification number
ft = foot or feet
ft/sec = foot or feet per second
g = gram
gal/wk = gallon per week
gal/yr = gallon per year
GLC = ground level concentration
GLCmax = maximum (predicted) ground-level concentration
gpm = gallon per minute
gr/1000scf = grain per 1000 standard cubic feet
gr/dscf = grain per dry standard cubic feet
H₂CO = formaldehyde
H₂S = hydrogen sulfide
H₂SO₄ = sulfuric acid
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
HC = hydrocarbons
HCl = hydrochloric acid, hydrogen chloride
Hg = mercury
HGB = Houston/Galveston/Brazoria
hp = horsepower
hr = hour
IFR = internal floating roof tank
in H₂O = inches of water
in Hg = inches of mercury
IR = infrared
ISC3 = Industrial Source Complex, a dispersion model
ISCST3 = Industrial Source Complex Short-Term, a dispersion model
K = Kelvin; extension of the degree Celsius scaled-down to absolute zero
LACT = lease automatic custody transfer
LAER = lowest achievable emission rate
lb = pound
lb/day = pound per day
lb/hr = pound per hour
lb/MMBtu = pound per million British thermal units
LDAR = Leak Detection and Repair (Requirements)
LNG = liquefied natural gas
LPG = liquefied petroleum gas
LT/D = long ton per day
m = meter
m³ = cubic meter
m/sec = meters per second
MACT = maximum achievable control technology
MAERT = Maximum Allowable Emission Rate Table
MERA = Modeling and Effects Review Applicability
mg = milligram
mg/g = milligram per gram
mL = milliliter
MMBtu = million British thermal units
MMBtu/hr = million British thermal units per hour
MSDS = material safety data sheet
MSS = maintenance, startup, and shutdown
MW = megawatt
NAAQS = National Ambient Air Quality Standards
NESHAP = National Emission Standards for Hazardous Air Pollutants
NGL = natural gas liquids
NNSR = nonattainment new source review
NO_x = total oxides of nitrogen
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 PM₁₀ and PM_{2.5}, as represented
PM_{2.5} = particulate matter equal to or less than 2.5 microns in diameter
PM₁₀ = total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, 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
SO₂ = sulfur dioxide
SOCMI = synthetic organic chemical manufacturing industry
SRU = sulfur recovery unit
TAC = Texas Administrative Code
TCAA = Texas Clean Air Act
TCEQ = Texas Commission on Environmental Quality
TD = Toxicology Division
TLV = threshold limit value
TMDL = total maximum daily load
tpd = tons per day
tpy = tons per year
TVP = true vapor pressure
VOC = volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
VRU = vapor recovery unit or system

Special Conditions

Permit Numbers 93938 and PSDTX1244

1. This permit authorizes emissions only from those emission points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit. Also, this permit authorizes the emissions from the planned maintenance, startup, and shutdown (MSS) activities listed in Attachment A, Attachment B, or the MAERT attached to this permit. 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 non-ILE planned maintenance activities that this permit authorizes to be performed.

Federal Applicability

2. These facilities shall comply with the applicable requirements of Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60):
 - A. Subpart A: General Provisions.
 - B. Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
 - C. Subpart KKKK: Standards of Performance for Stationary Combustion Turbines.
3. These facilities shall comply with the applicable requirements of 40 CFR Part 63:
 - A. Subpart A: General Provisions.
 - B. Subpart ZZZZ: National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Emission Standards and Operating Specifications

4. This permit authorizes two General Electric 7FA (GE 7FA) natural gas fired combustion turbine generators (CTGs), Emission Point Nos. [EPNs] U1-STK and U2-STK, each rated at a maximum base-load electric output of approximately 195 megawatts (MW) and operating in combined cycle with its heat recovery steam generator (HRSG).
5. Emission Rates.
 - A. The concentration of nitrogen oxides (NO_x) from each CTG (EPNs: U1-STK and U2-STK) shall not exceed 2 parts per million by volume dry (ppmvd) corrected to 15 percent oxygen (O₂), on a rolling 24-hour average, subject to the following specifications:
 - (1) A valid hour consists of a minimum of 4, and normally 60, approximately equally-spaced data points.
 - (2) Excess emissions during initial or other major dry low NO_x burner tuning sessions are excluded. Major tuning sessions are scheduled events, and would occur after the completion of initial construction, a combustor change-out, a major repair, maintenance to a combustor, or other similar circumstances.

- B. The concentration of carbon monoxide (CO) from each CTG (EPNs: U1-STK and U2-STK) shall not exceed 4 ppmvd corrected to 15 percent O₂, on a rolling three-hour average, for load operations at 60 percent or above.
- C. The concentration of CO from each CTG (EPNs: U1-STK and U2-STK) shall not exceed 6 ppmvd corrected to 15 percent O₂, on a rolling three-hour average, for load operations below 60 percent.
- D. The concentration of volatile organic compounds (VOC) from each CTG (EPNs: U1-STK and U2-STK) shall not exceed 2 ppmvd corrected to 15 percent O₂, on a three-hour average.
- E. The concentration of ammonia (NH₃) from each CTG (EPNs: U1-STK and U2-STK) shall not exceed 7 ppmvd corrected to 15 percent O₂, on a rolling 24-hour average.

The concentrations above do not apply during periods of turbine MSS activities.

- 6. Also authorized under this permit is a Fire Water Pump (EPN FWP1-STK) not to exceed 617 hp. The Fire Water Pump is limited to 100 hours of operation per year for non-emergency operation.
- 7. Fuel Specifications.
 - A. Fuel for the CTGs is limited to pipeline-quality natural gas containing no more than 5 grains total sulfur per 100 dry standard cubic feet on an hourly basis and 0.50 grain total sulfur per 100 dry standard cubic feet on an annual basis.
 - B. The Fire Water Pump (EPN FWP1-STK) is authorized to fire diesel fuel containing no more than 0.05 percent sulfur by weight.

Upon request by the Executive Director of the TCEQ or any local 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 CTGs and fire water pump, or shall allow air pollution control agency representatives to obtain a sample for analysis.

- 8. Except during MSS activities, the opacity shall not exceed five percent averaged over a six-minute period from EPNs U1-STK and U2-STK. During MSS activities, the opacity shall not exceed 15 percent. Each determination shall be made by first observing for visible emissions while each facility is in operation. Observations shall be made at least 15 feet and no more than 0.25 miles from the emission point. If visible emissions are observed from U1-STK or U2-STK, then the opacity shall be determined and documented within 24 hours for that emission point using 40 CFR Part 60, Appendix A, Test Method 9. Contributions from uncombined water shall not be included in determining compliance with this condition. Observations shall be performed and recorded quarterly. If the opacity exceeds five percent during normal operations or 15 percent during MSS activities, corrective action to eliminate the source of visible emissions shall be taken promptly and documented within one week of first observation.

Aqueous Ammonia (NH₃)

- 9. The permit holder shall maintain prevention and protection measures for the NH₃ storage system. The NH₃ storage tank area will be marked and protected so as to protect the NH₃ storage area from accidents that could cause a rupture. The aqueous ammonia stored shall have a concentration of less than 20 percent NH₃ by weight.

10. In addition to the requirements of Special Condition No. 9, the permit holder shall maintain the piping and valves in NH₃ service as follows:
 - A. All operating practices and procedures relating to the handling and storage of NH₃ shall conform to the safety recommendations specified for that compound by guidelines of the American National Standards Institute and the Compressed Gas Association.
 - B. Audio, visual, and olfactory (AVO) checks for NH₃ leaks shall be made once a day.
 - C. As soon as possible, following the detection of a leak, plant personnel shall take one or more of the following actions:
 - (1) Locate and isolate the leak, if necessary.
 - (2) Commence repair or replacement of the leaking component.
 - (3) Use a leak collection or containment system to control the leak until repair or replacement can be made if immediate repair is not possible.

Planned Maintenance, Startup, and Shutdown

11. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
12. Emissions during planned maintenance, startup and shutdown activities (MSS) will be minimized by limiting the duration of operation in planned maintenance, startup and shutdown mode as follows:
 - A. A planned startup of each CTG (EPNs: U1-STK and U2-STK) is defined as the period that begins when there is measurable fuel flow to the CTG and ends when the CTG load reaches 50 percent. A planned startup for each CTG is limited to 360 minutes. At the conclusion of the startup period (the CTG load reaches 50 percent or 360 minutes, whichever comes first), the permit holder shall comply with the emission rates limitations in Special Condition No. 5 and the MAERT.
 - B. A planned shutdown of each CTG (EPNs: U1-STK and U2-STK) is defined as the period that begins when the Data Acquisition and Handling System (DAHS) receives a shutdown signal from the turbine controller and CTG load falls below 50 percent and ends when there is no longer measurable fuel flow to the CTG. A planned shutdown for each CTG is limited to 60 minutes.
 - C. Emissions from combustion turbine diagnostic load reduction activities below 50 percent CTG load as identified in Attachment B shall be subject to the hourly MSS emission rates listed on the MAERT and shall not exceed 54 hours per year on a 12-month rolling basis for all gas turbines combined.
13. Compliance with the emissions limits for planned MSS activities identified in the MAERT attached to this permit may 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 permit application for all ILE planned maintenance activities. The total emissions from all ILE planned maintenance activities (See Attachment A) shall be considered to be no more than

the estimated potential to emit for those activities that are represented in the permit application.

- B. For each pollutant emitted through a stack during non-ILE planned maintenance activities (See Attachment B), where emissions are measured using a CEMS per Special Condition No. 14A, the permit holder shall compare the pollutant's short-term (hourly) emissions during planned maintenance activities (as measured by the CEMS) to the applicable short-term planned MSS emissions limit in the MAERT for each calendar month.
 - C. For each pollutant emitted through a stack during non-ILE planned maintenance activities (See Attachment B), where emissions are not measured using a CEMS, the permit holder shall determine the total emissions of the pollutant through the stack that result from such non-ILE planned maintenance activities in accordance with Special Condition No. 14B for each calendar month.
 - D. For each pollutant that is not emitted through a stack during non-ILE planned maintenance activities (See Attachment B), the permit holder shall determine the total emissions of the pollutant from such non-ILE planned maintenance activities in accordance with Special Condition No. 14B, for each calendar month.
14. The permit holder shall determine the emissions during planned MSS activities for use in Special Condition No. 13 as follows.
- A. For each pollutant where emissions (during normal facility operations) are measured with a CEMS that has been certified to measure the pollutant's emissions over the entire range of a planned MSS activity, the permit holder shall measure the emissions of the pollutant during the planned MSS activity using the CEMS.
 - B. For each pollutant not described in Special Condition No. 14A, 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, as represented in the planned MSS permit application. In lieu of using the emissions of the pollutant during the planned MSS activity as represented in the planned MSS permit application to calculate such emissions, the permit holder may determine the emissions of the pollutant during the planned MSS activity using an appropriate method, including but not limited to, any of the methods described in paragraphs 1 through 4 below, provided that the permit holder maintains appropriate records supporting such determination:
 - (1) Use of emission factor(s), facility-specific parameter(s), and/or engineering knowledge of the facility's operations.
 - (2) 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 facility's relevant operating parameters, including, but not limited to, electric load, temperature, fuel input, and fuel sulfur content.
 - (3) 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 relevant operating parameters, including, but not limited to, electric load, temperature, fuel input, and fuel sulfur content.
 - (4) Use of parametric emissions monitoring system (PEMS) data applicable to the facility.

Initial Determination of Compliance

15. Sampling ports and platforms shall be incorporated into the design of all exhaust stacks according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director.
16. The holder of this permit shall perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere from EPNs U1-STK and U2-STK and to determine initial compliance with all emission limits established in this permit. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Test Methods 201A and 202 or Test Method 5, modified for the concentration of particulate matter less than 10 microns in diameter (PM₁₀); Test Method 8 or Test Methods 6 or 6C for sulfur dioxide (SO₂); Test Method 9 for opacity; Test Method 10 for the concentration of CO; and Test Method 25A, modified to exclude methane and ethane, for the concentration of VOC. In addition, Test Method 20 or equivalent methods shall be used to determine the concentrations of NO_x and O₂ for the CTGs.

Fuel sampling (for EPNs U1-STK and U2-STK) using the methods and procedures of 40 CFR § 60.4415 may be conducted in lieu of stack sampling for SO₂ or the permit holder may be exempted from fuel monitoring of SO₂ as provided under 40 CFR § 60.4365(a). If fuel sampling is used, compliance with New Source Performance Standards (NSPS) Subpart KKKK, SO₂ limits shall be based on 100 percent conversion of the sulfur in the fuel to SO₂. Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling. The TCEQ Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling.

The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

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

The notice shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.
- (6) Procedure used to determine turbine loads during and after the sampling period.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports. A written proposed description of any deviation from sampling procedures specified in permit conditions, or the TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate

or equivalent procedure proposals for NSPS testing which must have EPA approval shall be submitted to the TCEQ Regional Director.

- B. Air contaminants and diluents to be sampled and analyzed include (but are not limited to) NO_x, O₂, CO, VOC, SO₂, PM₁₀, and NH₃. Fuel sampling using the methods and procedures of 40 CFR § 60.4415 or 40 CFR § 60.4365(a) may be conducted for monitoring SO₂.
- C. Each turbine shall be tested at or above 90 percent of maximum load operations. Also, each turbine shall be tested below 60 percent of maximum load operations but above 45 percent of maximum load operations. Each tested turbine load shall be identified in the sampling report. 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 40 CFR Part 60, Subpart KKKK.
- D. Sampling as required by this condition shall occur within 60 days after achieving the maximum production rate at which each turbine will be operated, but no later than 180 days after initial start-up of each unit. Additional sampling may be required by TCEQ or EPA.
- E. Within 60 days after the completion of the testing and sampling required herein, two copies of the sampling reports shall be distributed as follows:
 - One copy to the TCEQ Austin Regional Office.
 - One copy to the EPA Region 6 Office, Dallas.

Continuous Determination of Compliance

- 17. The holder of this permit shall install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NO_x, CO, and diluents (O₂ or CO₂) from each Stack (EPNs U1-STK and U2-STK).
 - A. Monitored NO_x and CO concentrations shall be corrected and reported in dimensional units corresponding to the emission rate and concentration limits established in this permit.
 - B. The CEMS data shall be used to demonstrate compliance with the emission limitations in Special Condition No. 5 and the MAERT.
 - C. The NO_x/diluent CEMS shall be operated according to the methods and procedures as set out in 40 CFR § 60.4345.
 - D. The CO CEMS shall meet the appropriate quality assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Each CO monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters if four successive quarterly CGA have been conducted for that four-quarter period. An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur at least two months apart.
 - E. Reporting of NO_x/diluent CEMS monitoring data for demonstrating compliance with NSPS Subpart KKKK and this permit shall be conducted in accordance with the methods and procedures as set out in 40 CFR § 60.4380(b).

- F. Compliance with the NO_x/diluent continuous emissions monitor requirements above can be demonstrated by meeting the requirements of 40 CFR Part 75 provided that the permit holder demonstrates compliance with applicable NSPS regulations.
- G. The TCEQ Austin Regional Office shall be notified at least 21 days prior to any required relative accuracy test audit in order to provide them the opportunity to observe the testing.
18. The holder of this permit shall continuously monitor ammonia emissions from EPNs U1-STK and U2-STK when their respective SCR is in operation using one of the following methods. The NH₃ concentrations shall be corrected and reported in accordance with Special Condition No. 5. Monitor downtime shall not exceed 5 percent of the time that the HRSGs were operated over the previous 12-month rolling period. Downtime consists of activities involving calibration, unanticipated power failure, unanticipated equipment malfunction, unplanned maintenance and planned maintenance.
- A. Install and operate an additional NO_x CEMS located upstream of each SCR system, which will be used in association with the NO_x CEMS located downstream of each SCR system, the NH₃ injection rate, and the following calculation procedure to estimate NH₃ slip:
- $$\text{NH}_3 \text{ slip, ppmvd} = (a - (b \times c / 1,000,000)) \times (1,000,000 / b) \times d$$
- where:
- a = ammonia injection rate pound per hour (lb/hr)/17 pound per pound mol (lb/lb-mole);
- b = dry exhaust gas flow rate (lb/hr)/29 (lb/lb-mole);
- c = change in measured NO_x concentration, ppmvd at 15 percent O₂, across catalyst; and
- d = appropriate correction factor.
- The correction factor shall be derived during compliance testing by comparing the measured and calculated ammonia slip. The ammonia inject rate and exhaust gas flow rate shall be recorded at least once every 15 minutes and be recorded as hourly averages. Each flow monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of span or 5 percent of the design value.
- B. Install and operate a dual stream system of NO_x CEMS at the exit of each SCR system. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS and the other exhaust stream would be routed through an NH₃ converter to convert NH₃ to NO_x and then to a second NO_x CEMS. The NH₃ slip concentration shall be calculated from the delta between the two NO_x CEMS readings (converted and unconverted).
- C. Install an ammonia CEMS. Each ammonia CEMS shall be audited at least once each calendar quarter and shall be designed and operated in accordance with manufacturer specifications.
19. The permit holder shall additionally install, calibrate, maintain, and operate continuous monitoring systems to monitor and record the average hourly natural gas consumption of each CTG. The permit holder shall comply with the initial certification and quality assurances as specified in 40 CFR Part 75, Appendix D.

Recordkeeping Requirements

20. 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, EPA, or any air pollution control agency with jurisdiction:
 - A. A copy of this permit.
 - B. Permit application dated October 29, 2010, and subsequent representations submitted to the TCEQ.
 - C. A complete copy of the testing reports and records of the initial performance testing completed pursuant to Special Condition No. 16 to demonstrate initial compliance.
 - D. Stack sampling results or other air emissions testing (other than CEMS data) that may be conducted on units authorized under this permit after the date of issuance of this permit.

21. The following information shall be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and shall be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction:
 - A. The CEMS data of NO_x, CO, and O₂ emissions from EPNs U1-STK and U2-STK to demonstrate compliance with the emission rates listed in the MAERT and Special Condition No. 5.
 - B. Raw data files of all CEMS data including calibration checks, adjustments, and maintenance performed on these systems in a permanent form suitable for inspection.
 - C. Records of the hours of operations and sulfur content of diesel fuel fired in the Fire Water Pump, pursuant to Special Condition Nos. 6 and 7.
 - D. Records of the sulfur content of natural gas fired in the CTGs pursuant to Special Condition No. 7.
 - E. Records of visible emissions and opacity observations pursuant to Special Condition No. 8.
 - F. Records of ammonia concentration, AVO checks, and maintenance performed to any piping and valves in NH₃ service pursuant to Special Condition Nos. 9 and 10.
 - G. Records of accidental releases, spills, or venting of NH₃ and the corrective action taken.
 - H. Records of NH₃ monitoring pursuant to Special Condition No. 18.
 - I. Records of MSS activities and validations pursuant to Special Condition Nos. 12, 13 and 14
 - J. Records of the hours of diagnostic load reduction activities of the turbine generators according to Special Condition No. 12C.
 - K. Records of actual emissions in accordance with Special Condition No. 23. **(04/24)**

Reporting

22. The holder of this permit shall submit to the TCEQ Austin Regional Office and the EPA Region 6 office in Dallas 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 40 CFR Part 60. These reports are only required for pollutant emission limits and CEMS subject to 40 CFR Part 60.

Projected Actual Emissions Tracking

23. The project associated with the permit application PI-1 dated March 19, 2024, TCEQ NSR Project No. 371659 and PI-1 dated July 8, 2024, TCEQ Project No. 376264, was determined to not be subject to major new source review through the use of projected actual emission rates as listed in the table of this special condition for EPNs U1-STK and U2-STK. Actual emissions from these sources shall be monitored as represented in the application, and records shall be maintained and reported in accordance with 30 TAC §116.127. Records shall be maintained for five calendar years from the project’s commencement of operation. A report is due to the Executive Director within 60 days after the end of each calendar year of which records must be maintained documenting the unit’s annual emissions during the calendar year that preceded submission of the report in accordance with 30 TAC §116.127(c). **(08/24)**

FIN/EPN	Pollutant	Baseline Actual Emissions ^b (tpy)	Post Project Allowable (tpy)	Projected Actual Emissions ^b (tpy)	CHA ^{a, b} Correction (tpy)	Monitoring Special Condition Nos.
FIN: CTG1	NOx	36.78	73.50	51.17	6.46	17
	CO	9.24	176.30	55.40	-	17
EPN: U1-STK	VOC	2.32	33.91	17.84	-	19
	PM	20.62	73.10	24.24	3.62	19
	PM ₁₀	20.62	73.10	24.24	3.62	19
	PM _{2.5}	20.62	73.10	24.24	3.62	19
FIN: CTG2	NOx	33.95	73.50	51.16	5.96	17
	CO	8.56	176.30	55.39	-	17
EPN: U2-STK	VOC	0.52	33.91	17.84	-	19
	PM	26.50	73.10	31.16	4.66	19
	PM ₁₀	26.50	73.10	31.16	4.66	19
	PM _{2.5}	26.50	73.10	31.16	4.66	19
^a CHA = Could have accommodated increment. ^b Baseline actual emissions, projected actual emissions, and CHA correction emissions shown in the table do not represent not-to-exceed permit limits.						

Attachment A

Permit Numbers 93938 and PSDTX1244

Inherently Low Emitting (ILE) Planned Maintenance Activities

Planned Maintenance Activity	Emissions					
	NH ₃ / urea	VOC	NO _x	CO	PM	SO ₂
Turbine Air Intake Filter Maintenance					x	
Catalyst Handling and Maintenance ¹					x	
Turbine Washing - Unit Online ²					x	
Ammonia Equipment Maintenance ³	x					
Sludge Management ⁴		x				
Inspection, repair, replacement, adjusting, testing, and calibration of analytical equipment, process instruments including sight glasses, meters, gauges, CEMS			x	x		
Small equipment and fugitive component repair/replacement in VOC. ⁵		x				

Notes:

1. Includes, but is not limited to, replacement, cleaning, activation, and deactivation of SCR and oxidation catalysts.
2. Involves use of water only.
3. Includes, but is not limited to, (i) repair/replacement of pumps, compressors, valves, pipes, flanges, transport lines, filters and screens in ammonia service and (ii) off-line NO_x control device maintenance (including maintenance of the aqueous ammonia systems associated with the SCR systems).
4. Includes, but is not limited to, management by vacuum truck/dewatering of materials in open pits and ponds, and 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.
5. Includes, but is not limited to, (i) repair/replacement of pumps, compressors, valves, pipes, flanges, transport lines, filters and screens in natural gas, fuel oil, diesel oil, ammonia, lube oil, and gasoline service, and (ii) vehicle and mobile equipment maintenance that may involve small VOC emissions, such as oil changes, transmission service, and hydraulic system service.

Date: July 29, 2021

Attachment B

Permit Numbers 93938 and PSDTX1244

Non-Inherently Low Emitting (non-ILE) Planned Maintenance Activities

Planned Maintenance Activity	EPN	Emissions					
		NH ₃ / urea	VOC	NO _x	CO	PM	SO ₂
Combustion Turbine Optimization ¹	U1-STK and U2-STK	x	x	x	x	x	x
NO _x Control Device Maintenance - Unit Online	U1-STK and U2-STK	x		x			
Gaseous Fuel Venting	GASVENT		x				
Diagnostic Load Reduction Activities Below 50 percent CTG Load ²	U1-STK and U2-STK	x	x	x	x	x	x

Note:

1. Includes, but is not limited to, (i) leak and operability checks (e.g., turbine over-speed tests, troubleshooting), (ii) balancing, and (iii) tuning activities that occur during seasonal tuning or after the completion of initial construction, a combustor change-out, a major repair, maintenance to a combustor, or other similar circumstances.

2. Includes, but is not limited, to combustion turbine load reductions (runbacks) associated with: initiation of steam turbine operation, low load steam turbine operation, variability in water or fuel supply, electric generator protection, and variation in turbine operations (including but not limited to, combustor flashback, primary combustion zone re-ignition, or combustion exhaust blade path spread).

Date: July 29, 2021

Emission Sources - Maximum Allowable Emission Rates

Permit Number 93938 and PSDTX1244

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)
U1-STK	GE 7FA (~ 195 MW)	NO _x (6)	18.80	73.50
		NO _x (MSS) (6)	160.00	--
		CO (6)	16.82	176.30
		CO (MSS) (6)	1800.00	--
		VOC	4.82	33.91
		VOC (MSS)	69.98	--
		SO ₂	27.07	10.87
		PM	33.43	73.10
		PM ₁₀	33.43	73.10
		PM _{2.5}	33.43	73.10
		H ₂ SO ₄	13.68	5.49
NH ₃	17.89	71.84		
U2-STK	GE 7FA (~ 195 MW)	NO _x (6)	18.80	73.50
		NO _x (MSS) (6)	160.00	--
		CO (6)	16.82	176.30
		CO (MSS) (6)	1800.00	--
		VOC	4.82	33.91
		VOC (MSS)	69.98	--
		SO ₂	27.07	10.87
		PM	33.43	73.10
		PM ₁₀	33.43	73.10
		PM _{2.5}	33.43	73.10
		H ₂ SO ₄	13.68	5.49
NH ₃	17.89	71.84		

Emission Sources - Maximum Allowable Emission Rates

CT1LOV-VNT	Combustion Turbine 1 Lube Oil Vent	VOC	0.09	0.40
		PM	0.09	0.40
		PM ₁₀	0.09	0.40
		PM _{2.5}	0.09	0.40
CT2LOV-VNT	Combustion Turbine 2 Lube Oil Vent	VOC	0.09	0.40
		PM	0.09	0.40
		PM ₁₀	0.09	0.40
		PM _{2.5}	0.09	0.40
ST1LOV-VNT	Steam Turbine 1 Lube Oil Vent	VOC	0.09	0.40
		PM	0.09	0.40
		PM ₁₀	0.09	0.40
		PM _{2.5}	0.09	0.40
CT1GSOV-VNT	Combustion Turbine 1 Generator Seal Oil Vent	VOC	0.09	0.40
CT2GSOV-VNT	Combustion Turbine 2 Generator Seal Oil Vent	VOC	0.09	0.40
ST1SOV-VNT	Steam Turbine Generator 1 Seal Oil Vent	VOC	0.09	0.40
DSL-TK1	Diesel Tank 1	VOC	0.07	<0.01
DSL-TK2	Diesel Tank 2	VOC	0.02	<0.01
FWP1-STK	Fire Water Pump	NO _x	3.81	0.19
		CO	4.12	0.21
		VOC	0.27	0.01
		PM	0.20	0.01
		PM ₁₀	0.20	0.01
		PM _{2.5}	0.20	0.01
		SO ₂	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

TURB-MSS	ILE Turbine Maintenance Fugitives (5)	PM	0.09	0.02
		PM ₁₀	0.09	0.02
		PM _{2.5}	<0.01	<0.01
		NH ₃	<0.01	<0.01
NG-FUG	Natural Gas Fugitives (5)	VOC	0.03	0.12
NH ₃ -FUG	Ammonia Fugitives (5)	NH ₃	0.12	0.51
GASVENT	Natural Gas Venting	VOC	9.72	0.64
MISC-MSS	Planned site-wide MSS activities (5)	VOC	0.55	0.02
		NO _x	<0.01	<0.01
		CO	<0.01	<0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO₂ - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
H₂SO₄ - sulfuric acid
NH₃ - ammonia
- (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) For each pollutant whose emissions during planned MSS activities are measured using a CEMS, the MSS lb/hr limits apply only during each clock hour that includes one or more minutes of MSS activities. During all other clock hours, the normal lb/hr limits apply.

Date: July 29, 2021



Texas Commission on Environmental Quality Air Quality Permit

A Permit Is Hereby Issued To
Lower Colorado River Authority
Authorizing the Continued Operation of
Thomas C. Ferguson Power Plant
Located at Horseshoe Bay, Llano County, Texas
Latitude 30° 26' 42" Longitude -98° 22' 15"

Permits: GHGPSDTX1

Revision Date: November 26, 2019

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)]¹
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)]¹
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.¹

¹ 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 ³ = microgram per cubic meter	H ₂ CO = formaldehyde
acfm = actual cubic feet per minute	H ₂ S = hydrogen sulfide
AMOC = alternate means of control	H ₂ SO ₄ = 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 ₂ 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 ³ = 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 _x = 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 PM₁₀ and PM_{2.5}, as represented
PM_{2.5} = particulate matter equal to or less than 2.5 microns in diameter
PM₁₀ = total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, 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
SO₂ = sulfur dioxide
SOCMI = synthetic organic chemical manufacturing industry
SRU = sulfur recovery unit
TAC = Texas Administrative Code
TCAA = Texas Clean Air Act
TCEQ = Texas Commission on Environmental Quality
TD = Toxicology Division
TLV = threshold limit value
TMDL = total maximum daily load
tpd = tons per day
tpy = tons per year
TVP = true vapor pressure
VOC = volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
VRU = vapor recovery unit or system

**LCRA, Thomas C. Ferguson Power Plant (GHGPSDTX1)
Prevention of Significant Deterioration Permit
For Greenhouse Gas Emissions
Final Permit Conditions**

PROJECT DESCRIPTION

The facility is a natural gas-fired combined-cycle electric generating unit at the Thomas C. Ferguson power plant in Llano County, Texas. The steam produced from the two new combustion turbines will exhaust to two dedicated Heat Recovery Steam Generators (HRSG) to produce steam. The steam produced from the two HRSGs is routed to the new shared steam turbine unit to produce electricity for sale to the Electric Reliability Council of Texas (ERCOT) power grid. **(11/19)**

EQUIPMENT LIST

The following devices are subject to this GHG PSD permit. **(11/19)**

EPN	Description
U1-STK and U2-STK	2 Natural Gas-Fired General Electric 7FA Combustion Turbines Generators (CTGs). Each unit is rated at a maximum base-load electric output of approximately 195 MW each and vented to a dedicated Heat Recovery Steam Generator (HRSG) that is equipped with a Selective Catalytic Reduction (SCR) and an Oxidation Catalyst (OC).
NG-FUG	Fugitive Natural Gas emissions from piping components
EMGEN1-STK	Diesel Fired Emergency Generator rated at 10.51 MMBtu/hr.
FWP1-STK	Diesel Fired Fire Water Pump rated at 4.32 MMBtu/hr.
SF6-FUG	SF ₆ Insulated Electrical Equipment (i.e., circuit breakers) consisting of two new 24 lb SF ₆ insulated circuit breakers and six new 58 lb SF ₆ insulated circuit breakers.

I. GENERAL PERMIT CONDITIONS

A. PERMIT EXPIRATION

As provided in 40 CFR §52.21(r), this PSD Permit shall become invalid if construction:

1. is not commenced (as defined in 40 CFR §52.21(b)(9)) within 18 months after the approval takes effect; or
2. is discontinued for a period of 18 months or more; or
3. is not completed within a reasonable time; and,

Pursuant to 40 CFR § 52.21(r) and Title 30 Texas Administrative Code (30 TAC) § 116.120(b), the Texas Commission on Environmental Quality (TCEQ) may extend the 18-month period upon a satisfactory written request showing that an extension is justified. **(5/17)**

B. PERMIT NOTIFICATION REQUIREMENTS

Permittee shall notify TCEQ in writing or by electronic mail of the: **(11/19)**

1. date construction is commenced, postmarked within 45 days of such date;
2. actual date of initial startup, as defined in 40 CFR §60.2, postmarked within 15 days of such date;
3. date upon which initial performance tests will commence, in accordance with the provisions of Section V, postmarked not less than 30 days prior to such date. Notification may be provided with the submittal of the performance test protocol required pursuant to Condition V.B.

C. FACILITY OPERATION

At all times, including periods of startup, shutdown, and maintenance (MSS), Permittee shall, to the extent practicable, maintain and operate the facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the TCEQ, EPA, or any other air pollution control program having jurisdiction which may include, but is not limited to, monitoring results, review of operating maintenance procedures and inspection of the facility. **(11/19)**

D. MALFUNCTION REPORTING

1. As required by Federal Operating Permit O19, LRCA shall provide information in the routine deviation reports to TCEQ on any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in CO₂ emissions above the allowable emission limits stated in Section II of this permit. **(11/19)**

E. RIGHT OF ENTRY

Authorized representatives of TCEQ, or any air pollution control program having jurisdiction, upon

the presentation of credentials, shall be permitted: **(5/17)**

1. to enter the premises where the facility is located or where any records are required to be kept under the terms and conditions of this PSD Permit;
2. during normal business hours, to have access to and to copy any records required to be kept under the terms and conditions of this PSD Permit;
3. to inspect any equipment, operation, or method subject to requirements in this PSD Permit; and,
4. to sample materials and emissions from the source(s).

F. TRANSFER OF OWNERSHIP

In the event of any changes in control or ownership of the facilities to be constructed, this PSD Permit shall be binding on all subsequent owners and operators. Permittee shall notify the succeeding owner and operator of the existence of the PSD Permit and its conditions by letter; a copy of the letter shall be forwarded to TCEQ within thirty days of the letter signature. **(5/17)**

G. SEVERABILITY

The provisions of this PSD Permit are severable, and, if any provision of the PSD Permit is held invalid, the remainder of this PSD Permit shall not be affected.

H. ADHERENCE TO APPLICATION AND COMPLIANCE WITH OTHER ENVIRONMENTAL LAWS

Permittee shall construct and operate this project in compliance with this PSD Permit, the application on which this permit is based, the TCEQ PSD Permit No. PSDTX1244 and all other applicable federal, state, and local air quality regulations. This PSD permit does not release the Permittee from any liability for compliance with other applicable federal, state and local environmental laws and regulations, including the Clean Air Act.

I. ACRONYMS AND ABBREVIATIONS

BACT	Best Available Control Technology
CAA	Clean Air Act
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CH ₄	Methane
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
DCS	Distributed Control System
dscf	Dry Standard Cubic Foot
EPN	Emission Point Number
ERCOT	Electric Reliability Council of Texas
FR	Federal Register
GHG	Greenhouse Gas
GWP	Global Warming Potential
gr	Grains
HHV	High Heating Value
hp	Horsepower
hr	Hour
HRSG	Heat Recovery Steam Generator
kwh	Kilowatt-hour
lb	Pound
LCRA	Lower Colorado River Authority
MMBtu	Million British Thermal Units
MSS	Maintenance, Startup, and Shutdown
MW	Megawatt
MWh	Megawatt-hr
N ₂ O	Nitrous Oxides
NSPS	New Source Performance Standards
OC	Oxidation Catalyst
PSD	Prevention of Significant Deterioration
QA/QC	Quality Assurance and/or Quality Control
RATA	Relative Accuracy Test Audit
SCFH	Standard Cubic Feet Per Hour
SCR	Selective Catalytic Reduction
SF ₆	Sulfur Hexafluoride
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TPY	Tons Per Year
USC	United States Code

II. SPECIAL PERMIT CONDITIONS

A. Facility Emission Limits

Annual emissions shall not exceed the following:

Table 1. Facility Emission Limits (11/19)

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates-TPY (4)
U1-STK	CT-1100	N ₂ O (5)	2
		CH ₄ (5)	17
		CO ₂ (5)	908,958
		CO ₂ e	909,979
U2-STK	CT-2100	N ₂ O (5)	2
		CH ₄ (5)	17
		CO ₂ (5)	908,958
		CO ₂ e	909,979
NG-FUG	Fugitive Natural Gas	CH ₄ (5)(6)	16
		CO ₂ e	405
EMERGEN1-STK	Emergency Generator	CO ₂ (5)(7)	695
		CO ₂ e	697
FWP1-STK	Fire Water Pump	CO ₂ (5)(7)	161
		CO ₂ e	161
SF ₆ -FUG	SF ₆ Insulated Electrical Equipment	SF ₆ (5)	<1
		CO ₂ e	137

(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). N₂O - nitrous oxide
 CH₄ - methane
 CO₂ - carbon dioxide
 SF₆ - sulfur hexafluoride

CO_{2e} - carbon dioxide equivalents based on the following Global Warming Potentials (1/2015): CO₂ (1), N₂O (298), CH₄ (25), SF₆ (22,800).

- (4). Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. Only the annual limits associated with CTG operations include both routine and MSS.
- (5). Emission rate is given for informational purposes only and does not constitute enforceable limit.
- (6). Because the emissions from this unit are calculated to be 96% methane (CH₄), the remaining pollutant emission (CO₂) is not presented in the table.
- (7). Because the emissions from this unit are calculated to be over 99.9% carbon dioxide (CO₂), the remaining pollutant emissions (CH₄ and N₂O) are not presented in the table.

B. Requirements for Combustion Turbine

1. Combustion Turbine Generator (CTG) BACT Emission Limits

- a. On or after the date of initial startup, Permittee shall not discharge or cause the discharge of emissions from the two Combustion Turbine Units (U1-STK and U2-STK) and steam turbine generator into the atmosphere in excess of 0.459 ton CO₂/MWh(net) on a 12-month rolling average, excluding each clock hour that includes one or more minutes of MSS activities. To determine this BACT emission limit, Permittee shall calculate the limit based on the measured net hourly energy output (MWh (net)) and the tons of CO₂ calculated from the equations provided in 40 CFR Appendix G or the CO₂ emissions CEMS data. The calculated hourly rate is averaged daily. **(11/19)**
- b. Permittee shall not exceed an average net heat rate of 7720 Btu/kwh (HHV) on a 12-month rolling average, excluding each clock hour that includes one or more minute of MSS activities, from the Combustion Turbine Units (U1-STK and U2-STK) and steam turbine generator. To determine this limit, Permittee shall calculate the average net heat rate on an hourly basis consistent with equation F-20 and procedure provided in 40 CFR Part 75, Appendix F, § 5.5.2 and the measured net hourly energy output (kwh). The calculated hourly heat rate is averaged daily. **(11/19)**
- c. Permittee shall determine the hourly stack gas volumetric flow rate from 40 CFR Part 75, Appendix F, using the fuel specific F factor or, as an alternative, permittee may install and operate a volumetric stack gas flow monitor and associated data acquisition and handling system in accordance with the CO₂ CEMS system provided in 40 CFR § 75.10(a)(3) and (a)(5).

2. CO₂ Emission Monitor or CO₂ Continuous Emissions Monitoring System (CEMS) for U1-STK and U2-STK

- a. Permittee shall install, calibrate, and operate a CO₂ emission monitor for each emission unit, U1-STK and U2-STK, and shall meet the applicable requirements, including certification testing, of 40 CFR Parts 60 and 75 to be used in conjunction with the F factor based on the procedures to calculate the volumetric stack gas flow rate in 40 CFR Part 75, Appendix F.
- b. As an alternative to Special Condition II.B.2.a., permittee may install a CO₂ CEMS and volumetric stack gas flow monitoring system with an automated data acquisition and handling system for measuring and recording CO₂ emissions discharged to the atmosphere.

- c. In accordance with 40 CFR § 75.4(b), permittee shall ensure that all required CO₂ monitoring system/equipment are installed and all certification tests are completed on or before the earlier of 90 unit operating days or 180 calendar days after the date the unit commences commercial operation (as defined in 40 CFR § 72.2).
- d. Permittee shall ensure compliance with the specifications and test procedures for CO₂ emission monitoring system at stationary sources, 40 CFR Part 75.
- e. Permittee shall meet the appropriate quality assurance requirements specified in 40 CFR Part 60, Appendix F for the CO₂ emission monitoring system.

3. Combustion Turbine Work Practice and Operational Requirements

- a. Permittee shall calculate the amount of CO₂ emitted from combustion in tons/hr, averaged daily and converted to tpy based on equation G-4 of 40 CFR Part 75 and the average net heat rate on an hourly basis based on the heat input calculation procedures contained in 40 CFR Part 75, Appendix F, equation F-20.
- b. Permittee shall calculate the CH₄ and N₂O emissions on a 12-month rolling average. Permittee shall determine compliance with the CH₄ and N₂O emissions limits contained in this section using the default CH₄ and N₂O emission factors contained in Table C-2 of 40 CFR Part 98 and the measured actual hourly heat input (HHV).
- c. Permittee shall calculate the CO_{2e} emissions on a 12-month rolling average, based on the procedures and Global Warming Potentials (GWP) contained in Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1.
- d. Fuel for the Combustion Turbines shall be limited to natural gas with a fuel sulfur content of up to 5 grains of sulfur per 100 dry standard cubic feet (gr S/100 dscf). The gross calorific value of the fuel shall be determined monthly by the procedures contained in 40 CFR Part 75, Appendix F, 5.5.2 and records shall be maintained of the monthly fuel gross calorific value for a period of five years. Upon request, Permittee shall provide a sample and/or analysis of the fuel-fired in the Combustion Turbines or shall allow a sample to be taken by TCEQ for analysis.
- e. The flow rate of the fuel combusted in emission units U1-STK and U2-STK shall be measured and recorded using an operational non-resettable elapsed flow meter.
- f. Permittee shall measure and record the new energy output (MWh (net)) on an hourly basis.
- g. On or before the date of initial performance test required by 40 CFR 60.8, and thereafter, Permittee shall install, and continuously operate, and maintain the HRSG equipped with a SCR and Oxidation Catalyst so emissions are at or below the emissions limits specified in this permit and TCEQ permit No. PSDTX1244.
- h. The existing Unit Number 1 natural gas-fired utility boiler (EPN Stack 1) shall be dismantled and permanently shutdown. To document the creditable reduction for the permanent shutdown of the boiler, permittee shall notify EPA by letter of the dismantling activities within 15 days of the permanent shutdown of the existing 440 MW boiler.

- i. On or after initial performance testing, permittee shall use the combustion turbine, Heat Recovery Steam Generator, Steam Turbine and Plant-wide energy efficiency processes, work practices and designs as represented in the permit application.

4. Requirements during Combustion Turbine (U1-STK and U2-STK) Startup and Shutdown

- a. Permittee shall minimize emissions during start-up and shutdown activities by operating and maintaining the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
- b. Emissions during startup and shutdown activities shall be minimized by limiting the duration of operation in startup and shutdown mode as follows:
 - (1). A startup of each CTG (U1-STK and U2-STK) is defined as the period that begins when there is measureable fuel flow to the CTG and ends when the CTG load reaches 50 percent. A startup for each CTG is limited to six hours.
 - (2). A shutdown of each CTG (U1-STK and U2-STK) is defined as the period that begins when the Data Acquisition and Handling System (DAHS) receives a shutdown signal from the turbine controller and CTG load falls below 50 percent and ends when there is no longer measureable fuel flow to the CTG. A shutdown for each CTG is limited to 60 minutes. **(11/19)**
- c. During startup and shutdown, emissions from each unit and associated equipment shall not exceed the following:

Table 2. Startup and Shutdown Emissions (11/19)

EPN	Description	Pollutant	Startup and Shutdown GHG Mass Basis ¹	Startup and Shutdown CO _{2e}
			lb/hr	lb/hr
U1-STK	CT-1100	CO ₂	153,392.10	153,392.10
		CH ₄	2.84	353.30
		N ₂ O	0.28	521.60
U2-STK	CT-2100	CO ₂	153,392.10	153,392.10
		CH ₄	2.84	353.30
		N ₂ O	0.28	521.60

¹ Startup and shutdown lb/hr emissions are an estimate and are enforceable through compliance with the applicable special condition(s) such as Special Condition II.B.4.e and other permit application representations.

- d. Permittee must record the time, date, fuel heat input (HHV) in MMBtu/hr and duration of each startup and shutdown event. The records must include hourly CO₂ emission levels as measured by the CO₂ emission monitor (or CO₂ CEMS with volumetric stack gas flowrate) and the calculations based on the actual heat input for the CO₂, CO_{2e}, N₂O, and CH₄ emissions during each startup and shutdown event based on the equations

represented in the permit application and Special Conditions II.B.4. These records must be kept for five years following the date of such event.

- e. During startup and trip conditions, Permittee shall utilize the steam turbine bypass system to direct the steam being generated in the HRSG to the condenser as needed to complete all startup operations within 6 hours.
- f. During startup and shutdown, the CTG and HRSG emissions shall comply with all provisions of BACT emission limitations in Special Condition II.B.4, including the emissions in the Table 2 above.

C. Requirements for Ancillary Combustion Equipment

1. Emergency Generator (EMGEN1-STK) and Fire Water Pump (FWP1-STK) Work Practice and Operational Requirements

- a. The Diesel Fired Fire Water Pump (FWP1-STK) and Diesel Fired Emergency Generator (EMGEN1-STK) are authorized to fire diesel fuel containing no more than 0.5 percent sulfur by weight. Upon request, Permittee shall provide a sample and/or an analysis of the fuel-fired in the emission units (FWP1-STK and EMGEN1-STK) or shall allow a sample to be taken by TCEQ for analysis to demonstrate the percent sulfur of the fuel.
- b. The Diesel Fired Emergency Generator shall not exceed a heat input value of 10.51 MMBtu/hr and Diesel Fired Fire Water Pump shall not exceed a heat input value of 4.32 MMBtu/hr. **(11/19)**
- c. The Diesel Fired Emergency Generator and Diesel Fired Fire Water Pump are each limited to 100 hours of non-emergency operation per year on a calendar year basis. **(11/19)**
- d. The Diesel Fired Fire Water Pump (FWP1-STK) and Diesel Fired Emergency Generator (EMGEN1-STK) shall meet the monitoring and recordkeeping requirements as required in 40 CFR Part 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
- e. Permittee shall install and maintain an operational non-resettable elapsed time meter for the Diesel Fired Fire Water Pump (FWP1-STK) and Diesel Fired Emergency Generator (EMGEN1-STK).
- f. Permittee shall maintain a file of all records, data measurements, reports and documents related to the operation of the Diesel Fired Fire Water Pump (FWP1-STK) and Diesel Fired Emergency Generator (EMGEN1-STK), including, but not limited to, the following: all records or reports pertaining to maintenance performed, all records relating to performance tests and monitoring of the emergency generator and fire pump equipment; records demonstrating compliance with diesel sulfur content required by condition II.C.1.a, fuel heat input values required in Special Condition II.C.2.b, hours of operation; and all other information required by this permit recorded in a permanent form suitable for inspection. The file must be retained for not less than five years following the date of such measurements, maintenance, reports, and/or records. **(11/19)**

D. Fugitive Emission Sources

1. Fugitive Emission Sources Work Practice and Operational Requirements

- a. For emission unit NG-FUG, CH₄ emissions shall be calculated annually (calendar year). Permittee shall not exceed 520 gas/vapor valves, 1460 gas/vapor flanges and 3 gas/vapor compressors. Emissions shall be calculated annually based on the emission factors from Table W-1A of 40 CFR Part 98, Subpart W, Petroleum and Natural Gas Systems.
- b. For emission unit SF₆-FUG, SF₆ emissions shall be calculated annually (calendar year) in accordance with the mass balance approach provided in equation DD-1 of the Mandatory Greenhouse Gas Reporting rules for Electrical Transmission and Distribution Equipment Use, 40 CFR Part 98, Subpart DD. Permittee shall not exceed 2 new 24 lb and 6 new 58 lb enclosed-pressure SF₆ insulated circuit breakers with leak detection. **(11/19)**
- c. Permittee shall maintain a file of all records, data measurements, reports and documents related to the fugitive emission sources including, but not limited to, the following: all records or reports pertaining to maintenance performed, all records relating to compliance with the Monitoring and Quality Assurance and Quality Control (QA/QC) procedures outlined in 40 CFR 98.304.

III. Recordkeeping Requirements

- A. Permittee shall maintain a file of all records, data, measurements, reports, and documents related to the operation of the facility, including, but not limited to, the following: all records or reports pertaining to significant maintenance performed on any system or device at the facility; all records relating to performance tests and monitoring of auxiliary combustion equipment; records demonstrating compliance with diesel fuel sulfur content required by condition II. C.1.a; and all other information required by this permit recorded in a permanent form suitable for inspection. The file must be retained for not less than five years following the date of such measurements, maintenance, reports, and/or records. **(11/19)**
- B. Permittee shall maintain records that include the following: the occurrence and duration of any startup, shutdown, or malfunction, performance testing, calibrations, checks, GHG emission units and CO₂ CEMS maintenance, duration of any periods during which a monitoring device is inoperative, and corresponding emission measurements. **(11/19)**
- C. Permittee shall maintain records for 5 years from the event that includes the duration of startup, shutdown, the initial shakedown period for the emission units, pollution control units and CEMS, malfunctions, performance testing, calibrations, checks, maintenance and duration of an inoperative monitoring device and emission units with the required corresponding emission data.
- D. Permittee shall maintain records of all GHG emission units and CO₂ CEMS certification tests and monitoring and compliance information required by this permit. **(11/19)**
- E. Permittee shall maintain records and submit a written report of all excess emissions to TCEQ semi-annually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator or authorized representative, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the

source. The report is due on the 30th day following the end of each semi-annual period and shall include the following:

1. Time intervals, data and magnitude of the excess emissions, the nature and cause (if known), corrective actions taken and preventive measures adopted;
 2. Applicable time and date of each period during which the monitoring equipment was inoperative (monitoring down-time);
 3. A statement in the report of a negative declaration; that is; a statement when no excess emissions occurred or when the monitoring equipment has not been inoperative, repaired or adjusted;
 4. Any failure to conduct any required source testing, monitoring, or other compliance activities; and
 5. Any violation of limitations on operation, including but not limited to restrictions on hours of operation of the emergency generator or fire pump.
- F. Excess emissions shall be defined as any period in which the facility emission exceeds a maximum emission limit set forth in this permit.
- G. Excess emissions indicated by GHG emission source certification testing or compliance monitoring shall be considered violations of the applicable emission limit for the purpose of this permit.
- H. All records required by this PSD Permit shall be retained for not less than 5 years following the date of such measurements, maintenance, and reports.

IV. Shakedown Periods

The combustion turbine emission limits and requirements in conditions II.A and II.B shall not apply during combustion shakedown periods. Shakedown is defined as the period beginning with initial startup and ending no later than initial performance testing, during which the Permittee conducts operational and contractual testing and tuning to ensure the safe, efficient and reliable operation of the plant. The shakedown period shall not exceed the time period for performance testing as specified in 40 CFR § 60.8. The requirements of special condition I.C. of this permit shall apply at all times.

V. Performance Testing Requirements:

- A. The holder of this permit shall perform an initial stack test to establish the actual quantities of air contaminants being emitted into the atmosphere from emission units U1-STK and U2-STK and to determine the initial compliance with the CO₂ emission limits established in this permit. Sampling shall be conducted in accordance with 40 CFR § 60.8 and EPA Method 3a or 3b for the concentration of CO₂ for the CTGs.
- B. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility, performance tests(s) must be conducted and a written report of the performance testing results furnished to the EPA. Additional sampling may be required by TCEQ or EPA.

- C. Permittee shall submit a performance test protocol to EPA no later than 30 days prior to the test to allow review of the test plan and to arrange for an observer to be present at the test. The performance test shall be conducted in accordance with the submitted protocol, and any changes required by EPA.
- D. The holder of this permit shall perform stack sampling and other testing as required to establish the actual quantities of CO₂ emissions being emitted into the atmosphere from emission units U1-STK and U2-STK and to determine the initial compliance with all emission limits established in this permit. Sampling shall be conducted in accordance with EPA Methods 1-4 and 3b for the concentration of CO₂ for the CTGs.
- E. Fuel sampling for emission units U1-STK and U2-STK shall be conducted in accordance with 40 CFR Part 75 and Part 98.
- F. Each turbine shall be tested at or above 90% of maximum load operations, below 90% of maximum load operations but above 60% and below 60% but above 45% load operations. Each tested turbine load shall be identified in the sampling report. The permit holder shall present at the pretest meeting the manner in which stack sampling will be executed in order to demonstrate compliance with the emissions limits contained in Section II.
- G. Performance tests must be conducted under such conditions to ensure representative performance of the affected facility. The owner or operator must make available to the EPA such records as may be necessary to determine the conditions of the performance tests.
- H. The owner or operator must provide the TCEQ at least 30 days' prior notice of any performance test, except as specified under other subparts, to afford the TCEQ the opportunity to have an observer present and/or to attend a pre-test meeting. If there is a delay in the original test date, the facility must provide at least 7 days prior notice of the rescheduled date of the performance test. **(11/19)**
- I. The owner or operator shall provide, or cause to be provided, performance testing facilities as follows:
 - 1. Sampling ports adequate for test methods applicable to this facility,
 - 2. Safe sampling platform(s),
 - 3. Safe access to sampling platform(s), and
 - 4. Utilities for sampling and testing equipment.
- J. Unless otherwise specified, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For purposes of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply.

VI. Agency Notifications

Permittee shall submit GHG permit applications, permit amendments, and other applicable permit information to:

Texas Commission on Environmental Quality
Air Permit Division
Mail Code 163
PO Box 13087
Austin, TX 78711-3087

Date: November 26, 2019