

# FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO  
City of Austin

AUTHORIZING THE OPERATION OF  
Sand Hill Energy Center  
Fossil Fuel Electric Power Generation

LOCATED AT  
Travis County, Texas  
Latitude 30° 12' 30" Longitude 97° 36' 50"  
Regulated Entity Number: RN100215052

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:     O2393     Issuance Date: \_\_\_\_\_

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For the Commission

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## **General Terms and Conditions**

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

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

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

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

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

## **Special Terms and Conditions:**

### **Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting**

1. Permit holder shall comply with the following requirements:
  - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
  - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.
  - C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
  - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

- E. Emission units subject to 40 CFR Part 63, 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<sub>x</sub>, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive

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

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

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

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

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

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

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

(4) Compliance Certification:

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

C. 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<sub>x</sub>, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
  - (1) An observation of visible emissions from a 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)

4. The permit holder shall comply with the following 30 TAC Chapter 115, Subchapter F requirements (relating to Cutback Asphalt Requirements):



- A. Title 30 TAC § 115.512(1) (relating to Control Requirements)
  - B. Title 30 TAC § 115.512(2) (relating to Control Requirements)
  - C. Title 30 TAC § 115.512(3) (relating to Control Requirements)
  - D. Title 30 TAC § 115.515 (relating to Testing Requirements)
5. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:
- A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)
  - B. Title 40 CFR § 60.8 (relating to Performance Tests)
  - C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)
  - D. Title 40 CFR § 60.12 (relating to Circumvention)
  - E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
  - F. Title 40 CFR § 60.14 (relating to Modification)
  - G. Title 40 CFR § 60.15 (relating to Reconstruction)
  - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)
6. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.
7. The permit holder shall comply with certified registrations submitted to the TCEQ for purposes of establishing federally enforceable emission limits. A copy of the certified registration shall be maintained with the permit. Records sufficient to demonstrate compliance with the established limits shall be maintained. The certified registration and records demonstrating compliance shall be provided, on request, to representatives of the appropriate TCEQ regional office and any local air pollution control agency having jurisdiction over the site. The permit holder shall submit updated certified registrations when changes at the site require establishment of new emission limits. If changes result in emissions that do not remain below major source thresholds, the permit holder shall submit a revision application to codify the appropriate requirements in the permit.

#### **Additional Monitoring Requirements**

8. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time 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**

9. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule (including the terms, conditions, monitoring, recordkeeping, and reporting identified in registered PBRs and permits by rule identified in the PBR Supplemental Tables dated November 29, 2023 in the application for project 36050), standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
  - A. Are incorporated by reference into this permit as applicable requirements
  - B. Shall be located with this operating permit
  - C. Are not eligible for a permit shield
10. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
11. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).
12. The permit holder shall comply with the following requirements for Air Quality Standard Permits:
  - A. Registration requirements listed in 30 TAC § 116.611, unless otherwise provided for in an Air Quality Standard Permit
  - B. General Conditions listed in 30 TAC § 116.615, unless otherwise provided for in an Air Quality Standard Permit
  - C. Requirements of the non-rule Air Quality Standard Permit for Pollution Control Projects

### **Compliance Requirements**

13. 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.

14. 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**

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

#### **Permit Location**

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

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

17. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only

requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

### Acid Rain Permit Requirements

18. For units SH-1, SH-2, SH-3, SH-4, SH-5, SH-6, and SH-7 (identified in the Certificate of Representation as units SH1, SH2, SH3, SH4, SH5, SH6, and SH7), located at the affected source identified by ORIS/Facility code 7900, 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 SO<sub>2</sub> and NO<sub>x</sub> 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. SO<sub>2</sub> 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 SO<sub>2</sub>.
- (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 SO<sub>2</sub> for the previous calendar year.
- (iii) Each ton of SO<sub>2</sub> emitted in excess of the acid rain emissions limitations for SO<sub>2</sub> 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 SO<sub>2</sub> 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 SO<sub>2</sub> 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<sub>x</sub> 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<sub>x</sub> under 40 CFR Part 76.

E. Excess emissions requirements for SO<sub>2</sub> and NO<sub>x</sub>.

- (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<sub>x</sub> 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 SO<sub>2</sub> allowances allocated by the EPA in 40 CFR Part 73 is enforceable only by the EPA Administrator.

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

19. For units SH-1, SH-2, SH-3, SH-4, SH-5, SH-6, and SH-7 (identified in the Certificate of Representation as units SH1, SH2, SH3, SH4, SH5, SH6, and SH7), located at the site identified by Plant code/ORIS/Facility code 7900, 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<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall operate the source and the unit in compliance with the requirements of the CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program and all other applicable State and federal requirements.
- (ii) The owners and operators of the CSAPR NO<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall comply with the requirements of 40 CFR Part 97, Subpart EEEEE for CSAPR NO<sub>x</sub> 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<sub>x</sub> Ozone Season Group 2 Trading Program.
  - (1) For units SH-1, SH-2, SH-3, SH-4, SH-5, SH-6, and SH-7 (identified in the Certificate of Representation as units SH1, SH2, SH3, SH4, SH5, SH6, and SH7), 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<sub>x</sub>, 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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.

20. CSAPR NO<sub>x</sub> 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<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> emissions requirements

- (i) CSAPR NO<sub>x</sub> 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<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall hold, in the source's compliance account, CSAPR NO<sub>x</sub> 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<sub>x</sub> emissions for such control period from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at the source.

- (2) If total NO<sub>x</sub> emissions during a control period in a given year from the CSAPR NO<sub>x</sub> Ozone Season Group 2 units at a CSAPR NO<sub>x</sub> Ozone Season Group 2 source are in excess of the CSAPR NO<sub>x</sub> 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<sub>x</sub> Ozone Season Group 2 unit at the source shall hold the CSAPR NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> Ozone Season Group 2 assurance provisions

- (1) If total NO<sub>x</sub> emissions during a control period in a given year from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> emissions exceeds the respective common designated representative's assurance level; and
  - (b) The amount by which total NO<sub>x</sub> emissions from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> emissions from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> 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<sub>x</sub> emissions exceed the sum, for such control period, of the state NO<sub>x</sub> 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<sub>x</sub> emissions from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> 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<sub>x</sub> emissions from the CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> Ozone Season Group 2 allowance that was allocated for such control period or a control period in a prior year.

- (2) A CSAPR NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> Ozone Season Group 2 allowance is a limited authorization to emit one ton of NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> Ozone Season Group 2 Trading Program.
- (ii) The designated representative of a CSAPR NO<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall make all submissions required under the CSAPR NO<sub>x</sub> 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<sub>x</sub> Ozone Season Group 2 Trading Program that applies to a CSAPR NO<sub>x</sub> Ozone Season Group 2 source or the designated representative of a CSAPR NO<sub>x</sub> Ozone Season Group 2 source shall also apply to the owners and operators of such source and of the CSAPR NO<sub>x</sub> Ozone Season Group 2 units at the source.
- (ii) Any provision of the CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program that applies to a CSAPR NO<sub>x</sub> Ozone Season Group 2 unit or the designated representative of a CSAPR NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> Ozone Season Group 2 source or CSAPR NO<sub>x</sub> 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

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

**Unit Summary**

<b>Unit/Group/ Process ID No.</b>	<b>Unit Type</b>	<b>Group/Inclusive Units</b>	<b>SOP Index No.</b>	<b>Regulation</b>	<b>Requirement Driver</b>
EDG	SRIC ENGINES	N/A	60III-1	40 CFR Part 60, Subpart IIII	No changing attributes.
EDG	SRIC ENGINES	N/A	63ZZZZ-1	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-CTWR	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	CLTWR-1, SCCTWR-1, SCCTWR-2, SCCTWR-3, SCCTWR-4	R1111-2	30 TAC Chapter 111, Visible Emissions	No changing attributes.
GRP-CTWR	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	CLTWR-1, SCCTWR-1, SCCTWR-2, SCCTWR-3, SCCTWR-4	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
GRP-OILVNT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	SH-VNT-1A, SH- VNT-1B, SH-VNT- 1C, SH-VNT-1D, SH-VNT-2A, SH- VNT-2B, SH-VNT- 2C, SH-VNT-2D, SH-VNT-3A, SH- VNT-3B, SH-VNT- 3C, SH-VNT-3D, SH-VNT-4A, SH- VNT-4B, SH-VNT- 4C, SH-VNT-4D, SH-VNT-5A, SH- VNT-5B, SH-VNT- 5C, SH-VNT-6A, SH-VNT-6B, SH- VNT-6C, SH-VNT- 6D, SH-VNT-7A, SH-VNT-7B, SH- VNT-7C, SH-VNT-	R5121-2	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.



**Unit Summary**

<b>Unit/Group/ Process ID No.</b>	<b>Unit Type</b>	<b>Group/Inclusive Units</b>	<b>SOP Index No.</b>	<b>Regulation</b>	<b>Requirement Driver</b>
		7D			
GRP-SCGG	STATIONARY TURBINES	GT-1, GT-2, GT-3, GT-4	60GG-1	40 CFR Part 60, Subpart GG	No changing attributes.
GRP-SCKKKK	STATIONARY TURBINES	GT-6, GT-7, GT-9	60KKKK-1	40 CFR Part 60, Subpart KKKK	No changing attributes.
GRP-SCTURB	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	SH-1, SH-2, SH-3, SH-4, SH-6, SH-7	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
SH-5	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
SH-5	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60DA-1	40 CFR Part 60, Subpart Da	No changing attributes.
SH-5	STATIONARY TURBINES	N/A	60GG-1	40 CFR Part 60, Subpart GG	No changing attributes.
SH-DSLUNLD	LOADING/UNLOADING OPERATIONS	N/A	R5211-1	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
SH-USEDLDG	LOADING/UNLOADING OPERATIONS	N/A	R5211-2	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.

**Applicable Requirements Summary**

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
EDG	EU	60III-1	CO	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a CO emission limit of 3.5 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
EDG	EU	60III-1	NMHC and NO <sub>x</sub>	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 75 KW and less than or equal to 560 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with an NMHC+NO <sub>x</sub> emission limit of 4.0 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
EDG	EU	60III-1	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

**Applicable Requirements Summary**

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					[G]§ 60.4211(f)	and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.			
EDG	EU	63ZZZZ-1	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
GRP-CTWR	EP	R1111-2	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
GRP-CTWR	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream having a combined weight of the VOC or classes of compounds specified in §115.121(c)(1)(B)-(C) of this	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2) § 115.126(4)	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)
						title equal to or less than 100 lbs in a continuous 24-hour period is exempt from the requirements of §115.121(c)(1) of this title.			
GRP-OILVNT	EP	R5121-2	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream having a combined weight of the VOC or classes of compounds specified in §115.121(c)(1)(B)-(C) of this title equal to or less than 100 lbs in a continuous 24-hour period is exempt from the requirements of §115.121(c)(1) of this title.	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2) § 115.126(4)	None
GRP-SCGG	EU	60GG-1	NO <sub>x</sub>	40 CFR Part 60, Subpart GG	§ 60.332(a)(1) § 60.332(a)(3) § 60.332(f) § 60.332(i)	No owner or operator shall discharge into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of the amount as determined from the specified equation.	[G]§ 60.334(b) § 60.334(j) § 60.334(j)(1) [G]§ 60.334(j)(1)(iii) [G]§ 60.335(a) § 60.335(b)(2)	[G]§ 60.334(b)	§ 60.334(j) § 60.334(j)(3) § 60.334(j)(5)
GRP-SCGG	EU	60GG-1	SO <sub>2</sub>	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) [G]§ 60.334(h)(3) ** See Periodic Monitoring Summary	None	None
GRP-SCKKKK	EU	60KKKK-1	NO <sub>x</sub>	40 CFR Part 60, Subpart KKKK	§ 60.4320(a)-Table 1 § 60.4320(a) § 60.4320(b) § 60.4325 § 60.4333(a) § 60.4335(b)(1) [G]§ 60.4345	New turbine firing natural gas with a heat input at peak load greater than 50 MMBtu/h and less than or equal to 850 MMBtu/h must meet the nitrogen oxides emission standard of 25 ppm at 15 percent O <sub>2</sub> .	§ 60.4335(b)(1) [G]§ 60.4345 [G]§ 60.4345 § 60.4350(a) § 60.4350(b) § 60.4350(d) § 60.4350(e) § 60.4350(f) § 60.4350(g) [G]§ 60.4400(a)	[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)
							§ 60.4400(b) § 60.4400(b)(1) § 60.4400(b)(4) § 60.4400(b)(5) § 60.4400(b)(6) [G]§ 60.4405		
GRP-SCKKKK	EU	60KKKK-1	SO <sub>2</sub>	40 CFR Part 60, Subpart KKKK	§ 60.4330(a)(2) § 60.4333(a)	You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO <sub>2</sub> /J (0.060 lb SO <sub>2</sub> /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.	§ 60.4365 § 60.4365(a) § 60.4415(a) § 60.4415(a)(2) § 60.4415(a)(2)(ii) ** See Periodic Monitoring Summary	§ 60.4365(a)	§ 60.4375(a)
GRP-SCTURB	EP	R1111-1	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
SH-5	EP	R1111-1	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
SH-5	EU	60DA-1	NO <sub>x</sub>	40 CFR Part 60, Subpart Da	§ 60.44Da(d)(1) § 60.44Da(d) § 60.48Da(a)	For a facility that commenced construction after July 9, 1997, but before March 1, 2005, no	§ 60.48Da(b) § 60.48Da(c) § 60.48Da(d) § 60.48Da(h)	§ 60.49Da(e) [G]§ 60.49Da(k) [G]§ 60.49Da(s) [G]§ 60.49Da(w)	§ 60.48Da(c) [G]§ 60.49Da(s) [G]§ 60.49Da(w) § 60.51Da(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)
						owner or operator shall discharge any gases that contain NO <sub>x</sub> (expressed as NO <sub>2</sub> ) in excess of 200 ng/J (1.6 lb/MWh) gross energy output, based on a 30-day rolling average basis.	§ 60.48Da(i) [G]§ 60.48Da(k)(2) [G]§ 60.48Da(k)(3) § 60.49Da(c)(2) § 60.49Da(e) § 60.49Da(f)(1) § 60.49Da(h) § 60.49Da(h)(2) § 60.49Da(h)(4) § 60.49Da(j)(2) § 60.49Da(j)(3) § 60.49Da(j)(4) [G]§ 60.49Da(k) § 60.49Da(n) [G]§ 60.49Da(s) [G]§ 60.49Da(w) § 60.50Da(a) [G]§ 60.50Da(d) [G]§ 60.50Da(e) § 60.50Da(f)		§ 60.51Da(b) § 60.51Da(b)(1) § 60.51Da(b)(2) § 60.51Da(b)(4) § 60.51Da(b)(5) § 60.51Da(b)(6) § 60.51Da(b)(7) § 60.51Da(b)(8) § 60.51Da(b)(9) [G]§ 60.51Da(c) § 60.51Da(f) [G]§ 60.51Da(h) § 60.51Da(j) § 60.51Da(k)
SH-5	EU	60DA-1	SO <sub>2</sub>	40 CFR Part 60, Subpart Da	§ 60.43Da(b)(2) § 60.43Da(g) § 60.48Da(a)	No owner or operator shall discharge any gases that contain sulfur dioxide in excess of 100 percent of the potential combustion concentration (zero percent reduction) when emissions are less than 86 ng/J (0.20 lb/MMBtu) heat input.	§ 60.48Da(c) § 60.50Da(a) § 60.50Da(c)(4) § 60.50Da(f) ** See Periodic Monitoring Summary	None	[G]§ 60.48Da(s) § 60.51Da(a)
SH-5	EU	60GG-1	NO <sub>x</sub>	40 CFR Part 60, Subpart GG	§ 60.332(a)(1) § 60.332(a)(3)	No owner or operator shall discharge into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of the amount as determined from the specified equation.	[G]§ 60.334(b) § 60.334(c) § 60.334(j) § 60.334(j)(1) [G]§ 60.334(j)(1)(iii) [G]§ 60.335(a) § 60.335(b)(2) § 60.335(b)(3) § 60.335(b)(6)	[G]§ 60.334(b) § 60.334(c)	§ 60.334(j) § 60.334(j)(5)

**Applicable Requirements Summary**

<b>Unit Group Process ID No.</b>	<b>Unit Group Process Type</b>	<b>SOP Index No.</b>	<b>Pollutant</b>	<b>State Rule or Federal Regulation Name</b>	<b>Emission Limitation, Standard or Equipment Specification Citation</b>	<b>Textual Description (See Special Term and Condition 1.B.)</b>	<b>Monitoring And Testing Requirements</b>	<b>Recordkeeping Requirements (30 TAC § 122.144)</b>	<b>Reporting Requirements (30 TAC § 122.145)</b>
SH-5	EU	60GG-1	SO <sub>2</sub>	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) [G]§ 60.334(h)(3) ** See Periodic Monitoring Summary	None	None
SH-DSLUNLD	EU	R5211-1	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(b)(2) § 115.212(b)(2) § 115.214(b)(1)(B) § 115.214(b)(1)(D) § 115.214(b)(1)(D)(i)	All land-based loading and unloading of VOC with a true vapor pressure less than 1.5 psia under actual storage conditions is exempt from the requirements of the division (relating to Loading and Unloading of VOCs), except as specified.	§ 115.214(b)(1)(A) § 115.214(b)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None
SH-USEDLDG	EU	R5211-2	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(b)(2) § 115.214(b)(1)(B) § 115.214(b)(1)(D) § 115.214(b)(1)(D)(i)	All land-based loading and unloading of VOC with a true vapor pressure less than 1.5 psia under actual storage conditions is exempt from the requirements of the division (relating to Loading and Unloading of VOCs), except as specified.	§ 115.214(b)(1)(A) § 115.214(b)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None

**Additional Monitoring Requirements**

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### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-CTWR	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-2
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: Quarterly	
Averaging Period: N/A	
Deviation Limit: Visible emissions unless a Method 9 observation is conducted within 24 hours of observing emissions and opacity exceeds 15%	
<p>Periodic Monitoring Text: The permit holder shall conduct a quarterly 1-minute visible emissions test of the affected source in accordance with Method 22 of Appendix A to part 60 while the affected source is in operation. If visible emissions are observed during any Method 22 test, the permit holder must conduct a 6 minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin as soon as practicable, but no later than 24 hours after observing visible emissions. Any monitoring data indicating opacity greater than 15% shall be reported as a deviation.</p> <p>If no visible emissions are observed in three consecutive quarterly test for any affected source, the permit holder may decrease the frequency of testing from quarterly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the permit holder must resume testing of that affected source on a quarterly basis and maintain that schedule until no visible emissions are observed in three consecutive quarterly tests. If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of testing from semiannually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a quarterly basis and maintain that schedule until no visible emissions are observed in three consecutive quarterly tests. All visible emission observations shall be recorded.</p>	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-SCGG	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart GG	SOP Index No.: 60GG-1
Pollutant: SO <sub>2</sub>	Main Standard: § 60.333(b)
Monitoring Information	
Indicator: Contract documentation	
Minimum Frequency: N/A	
Averaging Period: N/A	
Deviation Limit: Maximum total sulfur (S) content of 20.0 grains (gr) per 100 standard cubic feet (scf) of natural gas	
<p>Periodic Monitoring Text: The permit holder shall continuously possess a current valid purchase contract, tariff sheet, or transportation contract that the maximum total sulfur content of the natural gas in 20.0 gr or less per 100 scf of gas (per 40 CFR §60.334(h)(3)(i)). This maximum sulfur content will ensure that the 0.8 percent by weight (% wt) sulfur content limit specified for the fuel in 40 CFR Part 60, Subpart GG will not be exceeded, as demonstrated below:</p> <p>% wt of sulfur in fuel at 20 gr S per 100 scf = (20 gr S/100 scf gas) x ( 1lb S/7,000 gr S) x (1 lb-mole gas/16.9 lb gas*) x (379.6 scf gas/lb-mole gas) x (100 lb gas/10<sup>2</sup> lb gas) = 0.064 lb S/10<sup>2</sup> lb gas, i.e. % wt S</p> <p>*This molecular mass value is representative of the fuel combusted in the unit, but may vary to a minor degree.</p>	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-SCKKKK	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart KKKK	SOP Index No.: 60KKKK-1
Pollutant: SO <sub>2</sub>	Main Standard: § 60.4330(a)(2)
Monitoring Information	
Indicator: Contract documentation	
Minimum Frequency: N/A	
Averaging Period: N/A	
Deviation Limit: Maximum total sulfur content of 20.0 grains (gr) per 100 standard cubic feet (scf) of natural gas.	
<p>Periodic Monitoring Text: The permit holder shall continuously possess a current valid purchase contract, tariff sheet, or transportation contract that specifies that the maximum total sulfur content of the natural gas is 20.0 gr or less per 100 scf of gas (per 40 CFR § 60.4365(a)). This maximum sulfur content will ensure that the 0.060 lb/MMBtu SO<sub>2</sub> limit specified in 40 CFR Part 60, Subpart KKKK will not be exceeded, as demonstrated below:</p> <p>SO<sub>2</sub> emissions at 20 gr S per 100 scf = (20 gr S/100 scf) x (MMscf/1,000 MMBtu) x (lb/7,000 gr) x (10<sup>6</sup> scf/MMdscf) x (2 lb SO<sub>2</sub>/lb S) = 0.057 lb SO<sub>2</sub>/MMBtu.</p>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: GRP-SCTURB	
Control Device ID No.: N/A	Control Device Type: N/A
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-1
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: N/A	
Deviation Limit: Combust only pipeline quality natural gas (burn no alternate fuels)	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: SH-5	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Da	SOP Index No.: 60DA-1
Pollutant: SO <sub>2</sub>	Main Standard: § 60.43Da(b)(2)
Monitoring Information	
Indicator: Contract documentation	
Minimum Frequency: N/A	
Averaging Period: N/A	
Deviation Limit: Maximum total sulfur content of 20.0 grains (gr) per 100 standard cubic feet (scf) of natural gas	
<p>Periodic Monitoring Text: The permit holder shall continuously possess a current valid purchase contract, tariff sheet, or transportation contract that specifies that the maximum total sulfur content of the natural gas is 20.0 gr or less per 100 scf of gas (per 40 CFR §60.334(h)(3)(i)). This maximum sulfur content will ensure that the 0.20 lb/MMBtu SO<sub>2</sub> limit specified in 40 CFR Part 60, Subpart Da will not be exceeded, as demonstrated below:</p>	
$\text{SO}_2 \text{ emissions at } 20 \text{ gr S per } 100 \text{ scf} = (20 \text{ gr S}/100 \text{ scf}) \times (\text{MMscf}/1,000 \text{ MMBtu}) \times (\text{lb}/7,000 \text{ gr}) \times (10^6 \text{ scf/MMdscf}) \times (2 \text{ lb SO}_2/\text{lb S}) = 0.057 \text{ lb SO}_2/\text{MMBtu}$	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: SH-5	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart GG	SOP Index No.: 60GG-1
Pollutant: SO <sub>2</sub>	Main Standard: § 60.333(b)
Monitoring Information	
Indicator: Contract documentation	
Minimum Frequency: N/A	
Averaging Period: N/A	
Deviation Limit: Maximum total sulfur (S) content of 20.0 grains (gr) per 100 standard cubic feet (scf) of natural gas	
<p>Periodic Monitoring Text: The permit holder shall continuously possess a current valid purchase contract, tariff sheet, or transportation contract that the maximum total sulfur content of the natural gas is 20.0 gr or less per 100 scf of gas (per 40 CFR §60.334(h)(3)(i)). This maximum sulfur content will ensure that the 0.8 percent by weight (% wt) sulfur content limit specified for the fuel in 40 CFR Part 60, Subpart GG will not be exceeded, as demonstrated below:</p> <p>% wt of sulfur in fuel at 20 gr S per 100 scf = (20 gr S/100 scf gas) x (1 lb S/7,000 gr S) x (1 lb-mole gas/16.9 lb gas*) x (379.6 scf gas/lb-mole gas) x (100 lb gas/10<sup>2</sup> lb gas) = 0.064 lb S/10<sup>2</sup> lb gas, i.e. % wt S</p> <p>*This molecular mass value is representative of the fuel combusted in the unit, but may vary to a minor degree.</p>	

### Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: SH-5	
Control Device ID No.: N/A	Control Device Type: N/A
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-1
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: N/A	
Deviation Limit: Combust only pipeline quality natural gas (burn no alternate fuels)	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

**Permit Shield**

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### Permit Shield

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

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
EDG	N/A	30 TAC Chapter 115, Vent Gas Controls	The exhaust streams are from combustion units not being used as VOC control devices
EDG	N/A	30 TAC Chapter 117, Subchapter E, Division 1	Units are not power boilers or gas turbines.
GRP-CHEMTK	SH-TNK20, SH-TNK21, SH-TNK22, SH-TNK23, SH-TNK25, SH-TNK26, SH-TNK49, SH-TNK50	30 TAC Chapter 115, Storage of VOCs	VOC vapor pressure less than 1.5 psia
GRP-CHEMTK	SH-TNK20, SH-TNK21, SH-TNK22, SH-TNK23, SH-TNK25, SH-TNK26, SH-TNK49, SH-TNK50	40 CFR Part 60, Subpart K	Tanks were placed into service after May 19, 1978
GRP-CHEMTK	SH-TNK20, SH-TNK21, SH-TNK22, SH-TNK23, SH-TNK25, SH-TNK26, SH-TNK49, SH-TNK50	40 CFR Part 60, Subpart Ka	Tanks were placed into service after July 23, 1984
GRP-CHEMTK	SH-TNK20, SH-TNK21, SH-TNK22, SH-TNK23, SH-TNK25, SH-TNK26, SH-TNK49, SH-TNK50	40 CFR Part 60, Subpart Kb	Tank volumes are less than 75 cubic meters
GRP-CTWR	CLTWR-1, SCCTWR-1, SCCTWR-2, SCCTWR-3, SCCTWR-4	40 CFR Part 63, Subpart Q	No chromium based water treatment chemicals used.
GRP-DSLTK	SH-TNK17, SH-TNK18	30 TAC Chapter 115, Storage of VOCs	VOC vapor pressure less than 1.5 psia
GRP-DSLTK	SH-TNK17, SH-TNK18	40 CFR Part 60, Subpart K	Tanks were placed into service after May 19, 1978
GRP-DSLTK	SH-TNK17, SH-TNK18	40 CFR Part 60, Subpart Ka	Tanks were placed into service after July 23, 1984
GRP-DSLTK	SH-TNK17, SH-TNK18	40 CFR Part 60, Subpart Kb	Tank volumes are less than 75 cubic meters.
GRP-HTR	HTR-01, HTR-02, HTR-03	30 TAC Chapter 115, Vent Gas Controls	The exhaust streams are from combustion units not being used as VOC control devices

**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-HTR	HTR-01, HTR-02, HTR-03	30 TAC Chapter 117, Subchapter E, Division 1	Units are not power boilers or gas turbines.
GRP-OILRES	SH-TNK1, SH-TNK2, SH-TNK27, SH-TNK28, SH-TNK29, SH-TNK3, SH-TNK30, SH-TNK31, SH-TNK32, SH-TNK33, SH-TNK34, SH-TNK35, SH-TNK36, SH-TNK37, SH-TNK38, SH-TNK39, SH-TNK4, SH-TNK40, SH-TNK41, SH-TNK42, SH-TNK43, SH-TNK44, SH-TNK5, SH-TNK6	30 TAC Chapter 115, Storage of VOCs	These tanks are process tanks and are not storage tanks under 30 TAC §115.110(a).
GRP-OILRES	SH-TNK1, SH-TNK2, SH-TNK27, SH-TNK28, SH-TNK29, SH-TNK3, SH-TNK30, SH-TNK31, SH-TNK32, SH-TNK33, SH-TNK34, SH-TNK35, SH-TNK36, SH-TNK37, SH-TNK38, SH-TNK39, SH-TNK4, SH-TNK40, SH-TNK41, SH-TNK42, SH-TNK43, SH-TNK44, SH-TNK5, SH-TNK6	40 CFR Part 60, Subpart K	Tanks were placed into service after May 19, 1978
GRP-OILRES	SH-TNK1, SH-TNK2, SH-TNK27, SH-TNK28, SH-TNK29, SH-TNK3, SH-TNK30, SH-TNK31, SH-TNK32, SH-TNK33, SH-TNK34, SH-TNK35, SH-TNK36, SH-TNK37, SH-TNK38, SH-TNK39, SH-TNK4, SH-TNK40, SH-TNK41, SH-TNK42, SH-TNK43, SH-TNK44, SH-TNK5, SH-TNK6	40 CFR Part 60, Subpart Ka	Tanks were placed into service after July 23, 1984
GRP-OILRES	SH-TNK1, SH-TNK2, SH-TNK27, SH-TNK28, SH-TNK29, SH-TNK3, SH-TNK30, SH-TNK31, SH-TNK32, SH-TNK33, SH-TNK34, SH-TNK35, SH-	40 CFR Part 60, Subpart Kb	These tanks are process tanks and are not storage tanks under §60.110b(a).

### 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
	TNK36, SH-TNK37, SH-TNK38, SH-TNK39, SH-TNK4, SH-TNK40, SH-TNK41, SH-TNK42, SH-TNK43, SH-TNK44, SH-TNK5, SH-TNK6		
GRP-OILTNK	SH-TNK10, SH-TNK11, SH-TNK12, SH-TNK46, SH-TNK47, SH-TNK8, SH-TNK9	30 TAC Chapter 115, Storage of VOCs	VOC vapor pressure less than 1.5 psia
GRP-OILTNK	SH-TNK10, SH-TNK11, SH-TNK12, SH-TNK46, SH-TNK47, SH-TNK8, SH-TNK9	40 CFR Part 60, Subpart K	Tanks were placed into service after May 19, 1978
GRP-OILTNK	SH-TNK10, SH-TNK11, SH-TNK12, SH-TNK46, SH-TNK47, SH-TNK8, SH-TNK9	40 CFR Part 60, Subpart Ka	Tanks were placed into service after July 23, 1984
GRP-OILTNK	SH-TNK10, SH-TNK11, SH-TNK12, SH-TNK46, SH-TNK47, SH-TNK8, SH-TNK9	40 CFR Part 60, Subpart Kb	Tank volumes are less than 75 cubic meters
GRP-SCGG	GT-1, GT-2, GT-3, GT-4	30 TAC Chapter 117, Subchapter E, Division 1	Turbines placed into service after December 31, 1995
GRP-SCGG	GT-1, GT-2, GT-3, GT-4	40 CFR Part 63, Subpart YYYY	Site is not a major source of HAPs
GRP-SCKKKK	GT-6, GT-7, GT-9	30 TAC Chapter 117, Subchapter E, Division 1	Turbines placed into service after December 31, 1995
GRP-SCKKKK	GT-6, GT-7, GT-9	40 CFR Part 63, Subpart YYYY	Site is not a major source of HAPs
GRP-SCTURB	SH-1, SH-2, SH-3, SH-4, SH-6, SH-7	30 TAC Chapter 115, Vent Gas Controls	The exhaust streams are from combustion units not being used as VOC control devices
GRP-SCTURB	SH-1, SH-2, SH-3, SH-4, SH-6, SH-7	40 CFR Part 97, Subpart FFFFF	These units are not listed in the table in 40 CFR §97.911(a)(1) and have not opted into the Texas

### 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
			SO2 Trading Program.
GRP-SEPRTR	SH-TNK45, SH-TNK45A, SH-TNK48, TANK 5-4	30 TAC Chapter 115, Storage of VOCs	These tanks are process tanks and are not storage tanks under 30 TAC §115.110(a).
GRP-SEPRTR	SH-TNK45, SH-TNK45A, SH-TNK48, TANK 5-4	30 TAC Chapter 115, Water Separation	VOC vapor pressure less than 1.5 psia
GRP-SEPRTR	SH-TNK45, SH-TNK45A, SH-TNK48, TANK 5-4	40 CFR Part 60, Subpart K	Tanks were placed into service after May 19, 1978
GRP-SEPRTR	SH-TNK45, SH-TNK45A, SH-TNK48, TANK 5-4	40 CFR Part 60, Subpart Ka	Tanks were placed into service after July 23, 1984
GRP-SEPRTR	SH-TNK45, SH-TNK45A, SH-TNK48, TANK 5-4	40 CFR Part 60, Subpart Kb	These tanks are process tanks and are not storage tanks under §60.110b(a).
GRP-SEPRTR	SH-TNK45, SH-TNK45A, SH-TNK48, TANK 5-4	40 CFR Part 63, Subpart VV	This subpart is not referenced by any other subpart of 40 CFR Parts 60, 61 or 63 that is applicable to the site
SH-5	N/A	30 TAC Chapter 115, Vent Gas Controls	The exhaust streams are from combustion units not being used as VOC control devices
SH-5	N/A	30 TAC Chapter 117, Subchapter E, Division 1	Placed into service after Dec. 31, 1995.
SH-5	N/A	40 CFR Part 63, Subpart JJJJJJ	Heat recovery steam generators are not included in the definition of a boiler.
SH-5	N/A	40 CFR Part 63, Subpart YYYY	Site is not a major source of HAPs
SH-5	N/A	40 CFR Part 97, Subpart FFFFFF	This unit is not listed in the table in 40 CFR §97.911(a)(1) and has not opted into the Texas SO2 Trading Program.
SH-CLARIFY	N/A	30 TAC Chapter 115, Storage of VOCs	The tank is a process tank and is not a storage

### 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
			tank under 30 TAC §115.110(a).
SH-CLARIFY	N/A	40 CFR Part 60, Subpart K	Tanks were placed into service after May 19, 1978
SH-CLARIFY	N/A	40 CFR Part 60, Subpart Ka	Tanks were placed into service after July 23, 1984
SH-CLARIFY	N/A	40 CFR Part 60, Subpart Kb	These tanks are process tanks and are not storage tanks under §60.110b(a).
SH-EPOXY	N/A	40 CFR Part 63, Subpart HHHHHH	The site does not use methylene chloride to conduct paint stripping operations, nor does the site conduct any painting other than for facility maintenance, as defined in 40 CFR §63.11180.
SH-EPOXY	N/A	40 CFR Part 63, Subpart MMMM	Site is not a major source of HAPs
SH-PAINT	N/A	40 CFR Part 63, Subpart HHHHHH	The site does not use methylene chloride to conduct paint stripping operations, nor does the site conduct any painting other than for facility maintenance, as defined in 40 CFR §63.11180.
SH-PAINT	N/A	40 CFR Part 63, Subpart MMMM	Site is not a major source of HAPs
SH-PARTCLN	N/A	30 TAC Chapter 115, Degreasing Processes	The unit is a remote reservoir cold solvent cleaner that uses solvent with a TVP equal to or less than 0.6 psia measured at 100 deg F, has a drain area less than 16 square inches, and waste solvent is properly disposed of in enclosed containers.
SH-PARTCLN	N/A	40 CFR Part 63, Subpart T	Cleaner does not use halogenated solvents

**New Source Review Authorization References**

**New Source Review Authorization References ..... 45**

**New Source Review Authorization References by Emission Unit ..... 46**

### New Source Review Authorization References

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

<b>Prevention of Significant Deterioration (PSD) Permits</b>	
PSD Permit No.: PSDTX1012M2	Issuance Date: 12/06/2021
<b>Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.</b>	
Authorization No.: 48106	Issuance Date: 12/06/2021
Authorization No.: 160194	Issuance Date: 02/26/2020
<b>Permits By Rule (30 TAC Chapter 106) for the Application Area</b>	
Number: 106.102	Version No./Date: 09/04/2000
Number: 106.227	Version No./Date: 09/04/2000
Number: 106.242	Version No./Date: 09/04/2000
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.265	Version No./Date: 09/04/2000
Number: 106.371	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: 106.475	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**
CLTWR-1	COOLING TOWER 1	48106, PSDTX1012M2
EDG	TWO DIESEL FIRED EMERGENCY GENERATOR ENGINES	48106, PSDTX1012M2
GT-1	GAS TURBINE 1	48106, PSDTX1012M2
GT-2	GAS TURBINE 2	48106, PSDTX1012M2
GT-3	GAS TURBINE 3	48106, PSDTX1012M2
GT-4	GAS TURBINE 4	48106, PSDTX1012M2
GT-6	GAS TURBINE 6	48106, PSDTX1012M2
GT-7	GAS TURBINE 7	48106, PSDTX1012M2
GT-9	GAS TURBINE 9	48106, PSDTX1012M2
HTR-01	INLET AIR HEATER 1	48106, PSDTX1012M2
HTR-02	INLET AIR HEATER 2	48106, PSDTX1012M2
HTR-03	INLET AIR HEATER 3	48106, PSDTX1012M2
SCCTWR-1	SIMPLE CYCLE COOLING TOWER 1	48106, PSDTX1012M2
SCCTWR-2	SIMPLE CYCLE COOLING TOWER 2	48106, PSDTX1012M2
SCCTWR-3	SIMPLE CYCLE COOLING TOWER 3	48106, PSDTX1012M2
SCCTWR-4	SIMPLE CYCLE COOLING TOWER 4	48106, PSDTX1012M2
SH-1	GAS TURBINE 1 STACK	48106, PSDTX1012M2
SH-2	GAS TURBINE 2 STACK	48106, PSDTX1012M2
SH-3	GAS TURBINE 3 STACK	48106, PSDTX1012M2
SH-4	GAS TURBINE 4 STACK	48106, PSDTX1012M2
SH-5	HEAT RECOVERY STEAM GENERATOR 5	48106, PSDTX1012M2



**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**
SH-5	UNIT 5 COMBINED CYCLE GAS TURBINE	48106, PSDTX1012M2
SH-6	UNIT 6 SIMPLE CYCLE GAS TURBINE STACK	48106, PSDTX1012M2
SH-7	UNIT 7 SIMPLE CYCLE GAS TURBINE STACK	48106, PSDTX1012M2
SH-CLARIFY	CLARIFIER	48106, PSDTX1012M2
SH-DSLUNLD	DIESEL UNLOADING TO EMERGENCY ENGINE STORAGE TANKS	106.472/09/04/2000
SH-EPOXY	MAINTENANCE PAINTING WITH EPOXY	48106, PSDTX1012M2
SH-PAINT	MAINTENANCE PAINTING	106.263/11/01/2001
SH-PARTCLN	PARTS CLEANER	106.454/11/01/2001
SH-TNK1	UNIT 1 AUXILIARY SKID LUBE OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK10	UNIT 3 UNDERGROUND WASH WATER TANK	48106, PSDTX1012M2
SH-TNK11	UNIT 4 UNDERGROUND WASH WATER TANK	48106, PSDTX1012M2
SH-TNK12	UNIT 6 UNDERGROUND WASH WATER TANK	48106, PSDTX1012M2
SH-TNK17	DIESEL FUEL TANK FOR EMERGENCY ENGINE	48106, PSDTX1012M2
SH-TNK18	DIESEL FUEL TANK FOR EMERGENCY ENGINE	48106, PSDTX1012M2
SH-TNK2	UNIT 2 AUXILIARY SKID LUBE OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK20	NALCO PC11 TOTE TANK	48106, PSDTX1012M2
SH-TNK21	NALCO 71D5 TOTE TANK	48106, PSDTX1012M2
SH-TNK22	NALCO 73551 TOTE TANK	48106, PSDTX1012M2
SH-TNK23	NALCO CORE SHELL 71301 TOTE TANK	48106, PSDTX1012M2
SH-TNK25	NALCO CLEAR 7768 TOTE TANK	48106, PSDTX1012M2
SH-TNK26	NALCO TRASAR TRAC107 PLUS TOTE TANK	48106, PSDTX1012M2

**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**
SH-TNK27	GENERATOR LUBE OIL RESERVOIR - UNIT 1 GAS TURBINE	48106, PSDTX1012M2
SH-TNK28	GENERATOR LUBE OIL RESERVOIR - UNIT 2 GAS TURBINE	48106, PSDTX1012M2
SH-TNK29	GENERATOR LUBE OIL RESERVOIR - UNIT 3 GAS TURBINE	48106, PSDTX1012M2
SH-TNK3	UNIT 3 AUXILIARY SKID LUBE OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK30	GENERATOR LUBE OIL RESERVOIR - UNIT 4 GAS TURBINE	48106, PSDTX1012M2
SH-TNK31	GENERATOR LUBE OIL RESERVOIR - UNIT 6 GAS TURBINE	48106, PSDTX1012M2
SH-TNK32	GENERATOR LUBE OIL RESERVOIR - UNIT 7 GAS TURBINE	48106, PSDTX1012M2
SH-TNK33	HYDRAULIC/LUBE/SEAL OIL RESERVOIR FOR UNIT 5A GAS	48106, PSDTX1012M2
SH-TNK34	LUBE OIL RESERVOIR FOR UNIT 5C STEAM TURBINE	48106, PSDTX1012M2
SH-TNK35	UNIT 1 HYDRAULIC STARTER OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK36	UNIT 2 HYDRAULIC STARTER OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK37	UNIT 3 HYDRAULIC STARTER OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK38	UNIT 4 HYDRAULIC STARTER OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK39	UNIT 6 HYDRAULIC STARTER OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK4	UNIT 4 AUXILIARY SKID LUBE OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK40	UNIT 7 HYDRAULIC STARTER OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK41	CIRCULATING WATER PUMP LUBE OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK42	CIRCULATING WATER PUMP LUBE OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK43	CIRCULATING WATER PUMP LUBE OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK44	UNIT 5A GAS COMPRESSOR OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK45	OIL/WATER SEPARATOR TANK	48106, PSDTX1012M2

**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**
SH-TNK45A	OIL/WATER SEPARATOR SURGE TANK	48106, PSDTX1012M2
SH-TNK46	REJECT TANK FOR OIL/WATER SEPARATOR MEMBRANE	48106, PSDTX1012M2
SH-TNK47	UNDERGROUND WASH WATER TANK - UNIT 5A GAS TURBINE	48106, PSDTX1012M2
SH-TNK48	OIL-WATER SEPARATOR TANK	48106, PSDTX1012M2
SH-TNK49	NALCO H550 STORAGE TANK	48106, PSDTX1012M2
SH-TNK5	UNIT 6 AUXILIARY SKID LUBE OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK50	SULFURIC ACID STORAGE TANK	48106, PSDTX1012M2
SH-TNK6	UNIT 7 AUXILIARY SKID LUBE OIL RESERVOIR	48106, PSDTX1012M2
SH-TNK8	UNIT 1 UNDERGROUND WASH WATER TANK	48106, PSDTX1012M2
SH-TNK9	UNIT 2 UNDERGROUND WASH WATER TANK	48106, PSDTX1012M2
SH-USEDLDG	USED OIL LOADING TO TANK TRUCKS	48106, PSDTX1012M2
SH-VNT-1A	GENERATOR LUBE OIL VENT FOR UNIT 1 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-1B	BEARING LUBE OIL SUMP VENT FOR UNIT 1 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-1C	LUBE OIL RESERVOIR VENT FOR UNIT 1 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-1D	UNIT 1 HYDRAULIC OIL STARTER VENT	48106, PSDTX1012M2
SH-VNT-2A	GENERATOR LUBE OIL VENT FOR UNIT 2 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-2B	BEARING LUBE OIL SUMP VENT FOR UNIT 2 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-2C	LUBE OIL RESERVOIR VENT FOR UNIT 2 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-2D	UNIT 2 HYDRAULIC OIL STARTER VENT	48106, PSDTX1012M2
SH-VNT-3A	GENERATOR LUBE OIL VENT FOR UNIT 3 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-3B	BEARING LUBE OIL SUMP VENT FOR UNIT 3 GAS TURBINE	48106, PSDTX1012M2

**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**
SH-VNT-3C	LUBE OIL RESERVOIR VENT FOR UNIT 3 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-3D	UNIT 3 HYDRAULIC OIL STARTER VENT	48106, PSDTX1012M2
SH-VNT-4A	GENERATOR LUBE OIL VENT FOR UNIT 4 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-4B	BEARING LUBE OIL SUMP VENT FOR UNIT 4 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-4C	LUBE OIL RESERVOIR VENT FOR UNIT 4 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-4D	UNIT 4 HYDRAULIC OIL STARTER VENT	48106, PSDTX1012M2
SH-VNT-5A	HYDRAULIC OIL/LUBE OIL VENT ON UNIT 5A GAS TURBINE	48106, PSDTX1012M2
SH-VNT-5B	GENERATOR SEAL OIL VENT FOR UNIT 5A GAS TURBINE	48106, PSDTX1012M2
SH-VNT-5C	LUBE OIL VENT FOR UNIT 5C STEAM TURBINE	48106, PSDTX1012M2
SH-VNT-6A	GENERATOR LUBE OIL VENT FOR UNIT 6 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-6B	BEARING LUBE OIL SUMP VENT FOR UNIT 6 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-6C	LUBE OIL RESERVOIR VENT FOR UNIT 6 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-6D	UNIT 6 HYDRAULIC OIL STARTER VENT	48106, PSDTX1012M2
SH-VNT-7A	GENERATOR LUBE OIL VENT FOR UNIT 7 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-7B	BEARING LUBE OIL SUMP VENT FOR UNIT 7 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-7C	LUBE OIL RESERVOIR VENT FOR UNIT 7 GAS TURBINE	48106, PSDTX1012M2
SH-VNT-7D	UNIT 7 HYDRAULIC OIL STARTER VENT	48106, PSDTX1012M2
TANK 5-4	OIL/WATER SEPARATOR	48106, PSDTX1012M2

\*\*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 ..... 52**

## Acronym List

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

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

**Appendix B**

**Major NSR Summary Table ..... 53**

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
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
SH1	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9	2, 7, 8, 10, 14, 20, 21, 22, 24, 26, 27	2, 4, 21, 22, 24, 29, 30	2, 21, 22, 24
		NO <sub>x</sub> (MSS)	203.7	-			
		CO	44.2	60.8			
		CO (MSS)	923.0	-			
		VOC	4.1	5.6			
		VOC (MSS)	17.6	-			
		PM	4.0	5.5			
		PM <sub>10</sub>	4.0	5.5			
		PM <sub>2.5</sub>	4.0	5.5			
		SO <sub>2</sub>	0.3	0.5			
		NH <sub>3</sub>	6.4	6.1			
SH1	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub>	8.6	37.8	2, 8, 9, 10, 14, 20, 21, 22, 24, 26, 27	2, 4, 8, 21, 22, 24, 29, 30	2, 21, 22, 24
		NO <sub>x</sub> (MSS)	203.7	-			
		CO	9.5	41.4			



**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
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
		CO (MSS)	923.0	-			
		VOC	1.2	5.3			
		VOC (MSS)	17.6	-			
		PM	4.0	17.5			
		PM <sub>10</sub>	4.0	17.5			
		PM <sub>2.5</sub>	4.0	17.5			
		SO <sub>2</sub>	0.3	1.5			
		NH <sub>3</sub>	6.4	19.6			
SH2	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9	2, 7, 8, 10, 14, 20, 21, 22, 24, 26, 27	2, 4, 21, 22, 24, 29, 30	2, 21, 22, 24
		NO <sub>x</sub> (MSS)	203.7	-			
		CO	44.2	60.8			
		CO (MSS)	923.0	-			
		VOC	4.1	5.6			
		VOC (MSS)	17.6	-			
		PM	4.0	5.5			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM <sub>10</sub>	4.0	5.5			
		PM <sub>2.5</sub>	4.0	5.5			
		SO <sub>2</sub>	0.3	0.5			
		NH <sub>3</sub>	6.4	6.1			
SH2	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub>	8.6	37.8	2, 7, 8, 10, 14, 20, 21, 22, 24, 26, 27	2, 4, 21, 22, 24, 29, 30	2, 21, 22, 24
		NO <sub>x</sub> (MSS)	203.7	-			
		CO	9.5	41.4			
		CO (MSS)	923.0	-			
		VOC	1.2	5.3			
		VOC (MSS)	17.6	-			
		PM	4.0	17.5			
		PM <sub>10</sub>	4.0	17.5			
		PM <sub>2.5</sub>	4.0	17.5			
		SO <sub>2</sub>	0.3	1.5			
		NH <sub>3</sub>	6.4	19.6			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
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
SH3	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9	2, 7, 8, 10, 14, 20, 21, 22, 24, 26, 27	2, 4, 21, 22, 24, 29, 30	2, 21, 22, 24
		NO <sub>x</sub> (MSS)	203.7	-			
		CO	44.2	60.8			
		CO (MSS)	923.0	-			
		VOC	4.1	5.6			
		VOC (MSS)	17.6	-			
		PM	4.0	5.5			
		PM <sub>10</sub>	4.0	5.5			
		PM <sub>2.5</sub>	4.0	5.5			
		SO <sub>2</sub>	0.3	0.5			
		NH <sub>3</sub>	6.4	6.1			
SH3	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub>	8.6	37.8	2, 7, 8, 10, 14, 20, 21, 22, 24, 26, 27	2, 4, 21, 22, 24, 29, 30	2, 21, 22, 24
		NO <sub>x</sub> (MSS)	203.7	-			
		CO	9.5	41.4			
		CO (MSS)	923.0	-			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
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	1.2	5.3			
		VOC (MSS)	17.6	-			
		PM	4.0	17.5			
		PM <sub>10</sub>	4.0	17.5			
		PM <sub>2.5</sub>	4.0	17.5			
		SO <sub>2</sub>	0.3	1.5			
		NH <sub>3</sub>	6.4	19.6			
SH4	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9	2, 7, 8, 10, 14, 20, 21, 22, 24, 26, 27	2, 4, 21, 22, 24, 29, 30	2, 21, 22, 24
		NO <sub>x</sub> (MSS)	203.7	-			
		CO	44.2	60.8			
		CO (MSS)	923.0	-			
		VOC	4.1	5.6			
		VOC (MSS)	17.6	-			
		PM	4.0	5.5			
		PM <sub>10</sub>	4.0	5.5			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM <sub>2.5</sub>	4.0	5.5			
		SO <sub>2</sub>	0.3	0.5			
		NH <sub>3</sub>	6.4	6.1			
SH4	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub>	8.6	37.8	2, 7, 8, 10, 14, 20, 21, 22, 24, 26, 27	2, 4, 21, 22, 24, 29, 30	2, 21, 22, 24
		NO <sub>x</sub> (MSS)	203.7	-			
		CO	9.5	41.4			
		CO (MSS)	923.0	-			
		VOC	1.2	5.3			
		VOC (MSS)	17.6	-			
		PM	4.0	17.5			
		PM <sub>10</sub>	4.0	17.5			
		PM <sub>2.5</sub>	4.0	17.5			
		SO <sub>2</sub>	0.3	1.5			
		NH <sub>3</sub>	6.4	19.6			
SH5	GE 7FA + 681	NO <sub>x</sub>	46.7	191.4			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
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
	MMBtu/hr DB (~ 164 MW) (5)	NO <sub>x</sub> (MSS)	247.0	-	2, 5, 6, 14, 20, 21, 22, 24, 25, 26, 27	2, 4, 21, 22, 24, 25, 29, 30	2, 21, 22, 24
		CO	98.4	403.3			
		CO (MSS)	2,200.0	-			
		VOC	16.4	67.4			
		VOC (MSS)	150.0	-			
		PM	32.8	134.5			
		PM <sub>10</sub>	32.8	134.5			
		PM <sub>2.5</sub>	32.8	134.5			
		SO <sub>2</sub>	1.6	7.3			
		NH <sub>3</sub>	34.6	99.0			
		NH <sub>3</sub> (MSS)	65.0				
SH6	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9	2, 7, 8, 10, 14, 20, 21, 22, 24, 26, 27	2, 4, 21, 22, 24, 29, 30	2, 21, 22, 24
		NO <sub>x</sub> (MSS)	203.7	-			
		CO	44.2	60.8			
		CO (MSS)	923.0	-			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
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	4.1	5.6			
		VOC (MSS)	17.6	-			
		PM	4.0	5.5			
		PM <sub>10</sub>	4.0	5.5			
		PM <sub>2.5</sub>	4.0	5.5			
		SO <sub>2</sub>	0.3	0.5			
		NH <sub>3</sub>	6.4	6.1			
SH6	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub>	8.6	37.8	2, 7, 8, 10, 14, 20, 21, 22, 24, 26, 27	2, 4, 21, 22, 24, 29, 30	2, 21, 22, 24
		NO <sub>x</sub> (MSS)	203.7	-			
		CO	9.5	41.4			
		CO (MSS)	923.0	-			
		VOC	1.2	5.3			
		VOC (MSS)	17.6	-			
		PM	4.0	17.5			
		PM <sub>10</sub>	4.0	17.5			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM <sub>2.5</sub>	4.0	17.5			
		SO <sub>2</sub>	0.3	1.5			
		NH <sub>3</sub>	6.4	19.6			
SH7	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9	2, 7, 8, 10, 14, 20, 21, 22, 24, 26, 27	2, 4, 21, 22, 24, 29, 30	2, 21, 22, 24
		NO <sub>x</sub> (MSS)	203.7	-			
		CO	44.2	60.8			
		CO (MSS)	923.0	-			
		VOC	4.1	5.6			
		VOC (MSS)	17.6	-			
		PM	4.0	5.5			
		PM <sub>10</sub>	4.0	5.5			
		PM <sub>2.5</sub>	4.0	5.5			
		SO <sub>2</sub>	0.3	0.5			
		NH <sub>3</sub>	6.4	6.1			
SH7	GE LM 6000 –	NO <sub>x</sub>	8.6	37.8	2, 7, 8, 10, 14, 20, 21,	2, 4, 21, 22, 24, 29, 30	2, 21, 22, 24



**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
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
	Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub> (MSS)	203.7	-	22, 24, 26, 27		
		CO	9.5	41.4			
		CO (MSS)	923.0	-			
		VOC	1.2	5.3			
		VOC (MSS)	17.6	-			
		PM	4.0	17.5			
		PM <sub>10</sub>	4.0	17.5			
		PM <sub>2.5</sub>	4.0	17.5			
		SO <sub>2</sub>	0.3	1.5			
		NH <sub>3</sub>	6.4	19.6			
HTR-01	Inlet Air Heaters	NO <sub>x</sub>	0.49	0.25		4, 29	
		CO	0.41	0.21			
		VOC	0.03	0.01			
		PM	0.04	0.02			
		PM <sub>10</sub>	0.04	0.02			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
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
		SO <sub>2</sub>	<0.01	<0.01			
HTR-02	Inlet Air Heaters	NO <sub>x</sub>	0.49	0.25		4, 29	
		CO	0.41	0.21			
		VOC	0.03	0.01			
		PM	0.04	0.02			
		PM <sub>10</sub>	0.04	0.02			
		SO <sub>2</sub>	<0.01	<0.01			
HTR-03	Inlet Air Heaters	NO <sub>x</sub>	0.49	0.25		4, 29	
		CO	0.41	0.21			
		VOC	0.03	0.01			
		PM	0.04	0.02			
		PM <sub>10</sub>	0.04	0.02			
		SO <sub>2</sub>	<0.01	<0.01			
SC CTWR-1	Simple Cycle Cooling Tower 1	VOC	2.20	0.05			
		PM	0.21	0.42			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM <sub>10</sub>	0.14	0.29		29	
		PM <sub>2.5</sub>	<0.01	<0.01			
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01			
		HOCl	0.02	<0.01			
SC CTWR-2	Simple Cycle Cooling Tower 2	VOC	2.20	0.05		29	
		PM	0.21	0.42			
		PM <sub>10</sub>	0.14	0.29			
		PM <sub>2.5</sub>	<0.01	<0.01			
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01			
		HOCl	0.02	<0.01			
SC CTWR-3	Simple Cycle Cooling Tower 3	VOC	2.20	0.05		29	
		PM	0.21	0.42			
		PM <sub>10</sub>	0.14	0.29			
		PM <sub>2.5</sub>	<0.01	<0.01			
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
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
		HOCI	0.02	<0.01			
SC CTWR-4	Simple Cycle Cooling Tower 4	VOC	1.85	0.04		29	
		PM	0.03	0.06			
		PM <sub>10</sub>	0.02	0.04			
		PM <sub>2.5</sub>	<0.01	<0.01			
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01			
		HOCI	<0.01	<0.01			
CLTWR-1	Combined Cycle Cooling Tower 1	VOC	0.88	1.54		29	
		PM	2.74	12.0			
		PM <sub>10</sub>	0.84	3.69			
		PM <sub>2.5</sub>	0.01	0.02			
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01			
		HOCI	0.53	0.15			
SC PB FUG	Simple Cycle Power Block Fugitives (7)	VOC	0.01	0.06	14	29	
		H <sub>2</sub> S	<0.01	<0.01			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
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
SC MS FUG	Simple Cycle Natural Gas Meter Skid (7)	VOC	0.05	0.21	14	29	
		H <sub>2</sub> S	<0.01	<0.01			
CC PB FUG	Combined Cycle Power Block Fugitives (7)	VOC	0.02	0.07	14	29	
		H <sub>2</sub> S	<0.01	<0.01			
CC MS FUG	Combined Cycle Natural Gas Meter Skid (7)	VOC	0.05	0.22	14	29	
		H <sub>2</sub> S	<0.01	<0.01			
SC AMFUG	Simple Cycle Ammonia Fugitives (7)	NH <sub>3</sub>	0.25	1.11	17, 18, 19	29	
CC AMFUG	Combined Cycle Ammonia Fugitives (7)	NH <sub>3</sub>	0.11	0.47	17, 18, 19	29	
TANK 5-4	Oil/Water Separator	VOC	0.05	0.01		29	
EDG	Emergency Diesel Generator	NO <sub>x</sub>	7.3	3.2	13, 15	29	
		CO	1.4	0.6			
		VOC	0.37	0.14			
		PM	0.2	0.1			

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM <sub>10</sub>	0.2	0.1			
		SO <sub>2</sub>	<0.01	<0.01			
SC-VNTS	Simple Cycle Oil Vents (6)	PM <sub>10</sub>	0.14	0.62		29	
		VOC	0.28	1.24			
CC-VNTS	Combined Cycle Oil Vents (6)	PM <sub>10</sub>	0.02	0.09		29	
		PM <sub>2.5</sub>	0.02	0.09			
		VOC	0.04	0.18			
WTTNKS	Water Treatment Chemical Storage Tanks (6)	VOC	0.41	1.34		29	
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01			
		NH <sub>3</sub>	0.10	0.46			
OILRES	Circulating Water Pump/Gas (6) Compressor Lube Oil Reservoir	VOC	<0.01	<0.01		29	
WASHTNKS	Underground Wash Water Tanks (6)	VOC	0.04	0.01		29	
MSSFUG	Non-ILE	VOC	90.04	3.00	28	28, 29, 30	

**Major NSR Summary Table**

Permit Numbers: 48106 and PSDTX1012M2					Issuance Date: 12/06/2021		
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
	Maintenance Activities Attachment B (7)	PM <sub>10</sub>	1.12	0.18			
		PM <sub>2.5</sub>	0.17	0.03			
		H <sub>2</sub> S	0.02	<0.01			
		Exempt Solvent	0.01	0.04			
ILEMSS	ILE Maintenance Activities Attachment A (7)	NO <sub>x</sub>	0.32	0.70	28	28, 29, 30	
		CO	0.18	0.40			
		VOC	0.13	0.14			
		PM <sub>10</sub>	0.03	0.05			
		PM <sub>2.5</sub>	0.03	0.05			
		NH <sub>3</sub>	0.20	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)
  - NO<sub>x</sub> - total oxides of nitrogen
  - CO - carbon monoxide
  - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
  - PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>
  - PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>
  - PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
  - SO<sub>2</sub> - sulfur dioxide
  - HOCl - hypochlorous acid
  - H<sub>2</sub>S - hydrogen sulfide

H<sub>2</sub>SO<sub>4</sub> - sulfuric acid  
MSS - maintenance, startup, and shutdown

- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) For each pollutant whose emissions are measured during planned MSS activities using a CEMS, only the MSS lb/hr limits apply during each clock hour that includes one or more minutes of MSS activities. During all other clock hours, the normal lb/hr limits apply.
- (6) See Attachment C in the Special Conditions for the emission points included in each grouping.
- (7) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.



**Texas Commission on Environmental Quality  
Air Quality Permit**

*A Permit Is Hereby Issued To*  
**City of Austin**  
*Authorizing the Continued Operation of*  
**Sand Hill Energy Center**  
*Located at Del Valle, Travis County, Texas*  
Latitude 30° 12' 35" Longitude -97° 36' 46"

Permit: 48106

Issuance Date: December 6, 2021

Expiration Date: December 6, 2031

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

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

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

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

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

## Common Acronyms in Air Permits

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

NSPS = New Source Performance Standards  
PAL = plant-wide applicability limit  
PBR = Permit(s) by Rule  
PCP = pollution control project  
PEMS = predictive emission monitoring system  
PID = photo ionization detector  
PM = periodic monitoring  
PM = total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented  
PM<sub>2.5</sub> = particulate matter equal to or less than 2.5 microns in diameter  
PM<sub>10</sub> = total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented  
POC = products of combustion  
ppb = parts per billion  
ppm = parts per million  
ppmv = parts per million (by) volume  
psia = pounds (per) square inch, absolute  
psig = pounds (per) square inch, gage  
PTE = potential to emit  
RA = relative accuracy  
RATA = relative accuracy test audit  
RM = reference method  
RVP = Reid vapor pressure  
scf = standard cubic foot or feet  
scfm = standard cubic foot or feet (per) minute  
SCR = selective catalytic reduction  
SIL = significant impact levels  
SNCR = selective non-catalytic reduction  
SO<sub>2</sub> = sulfur dioxide  
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 48106 and PSDTX1012M2

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources – Maximum Allowable Emission Rates (MAERT)," including planned maintenance, startup, and shutdown (MSS) activities, and those sources are limited to the emission limits on that table and other conditions specified in this permit. **(3/15)**

### Federal Applicability

2. These facilities shall comply with applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations in the Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60) on Standards of Performance for New Stationary Sources promulgated for:
  - A. Subpart A: General Conditions.
  - B. Subpart Da: Standards of Performance for Electric Utility Steam Generating Units. [Heat Recovery Steam Generators (HRSG) duct burners]
  - C. Subparts GG and KKKK: Standards of Performance for Stationary Gas Turbines. The gas turbines are subject to either Subpart GG or Subpart KKKK. The permit holder will track the applicability of the NSPS Subparts to the gas turbines based on the serial numbers of the gas turbines. **(2/19)**

If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

3. The permit authorizes the following: **(2/19)**
  - A. Seven General Electric LM 6000 Sprint Class Simple Cycle Natural gas-fired Combustion Turbine Generators (CTGs) including a spare, each rated at a nominal electric power output of 48 megawatts (MW).
  - B. A General Electric 7FA natural gas-fired Combined Cycle CTG rated at a nominal electrical power output of 164 MW equipped with a duct burner fired HRSG with a maximum heat input of 681.5 million British thermal unit per hour (MMBtu/hr).

### Nitrogen Oxide (NO<sub>x</sub>) Emission Limitation

4. The permit holder will voluntarily limit emissions of NO<sub>x</sub> to a combined total of 1,500 tons per year (tpy) from the Decker Creek Power Plant and the Sand Hill Energy Center. The permit holder further agrees to make the 1,500 tpy cap between these two facilities federally enforceable with this permit.

### Combined Cycle CTG Emission Standards

5. The concentration of emissions from the CTG during loads greater than or equal to 76 megawatts (MW) of gross electrical output shall not exceed the following emission limits expressed in parts per million by volume dry (ppmvd) correct to 15% oxygen (O<sub>2</sub>), subject to the specifications in Special Condition No. 6. **(2/19)**

EPN	Pollutant	Concentration	Averaging time
SH5	NO <sub>x</sub>	5.0	1-hr average
	CO	17.5	
	VOC	5.2	
	NH <sub>3</sub>	10.0	

6. The following activities are excluded from the emission standards of Special Condition No. 5. **(2/19)**
- A. Startup of the CTG, defined as the period that begins when fuel flow is first detected and ends when the unit reaches 76 MW and the corrected stack NO<sub>x</sub> ppmvd concentration at 15% O<sub>2</sub> drops below 5 ppmvd and remains there for 15 minutes. A startup event shall not exceed 7 hours after fuel flow has been detected, except as allowed in Special Condition No. 6B. **(2/19)**
  - B. Extended startup of the CTG, defined as a startup that is greater than 7 hours after fuel flow has been detected. Three extended startups are authorized per calendar year and shall not exceed 16 hours per event.
  - C. Shutdown of the CTG, defined as the period beginning when the unit exits the “6Q” operating mode and the load on the CTG drops below 52 MW of gross electrical output and ends when fuel is no longer fed to the unit. A shutdown shall not exceed 120 minutes per event.
  - D. Reduced load operations below 76 MW of gross electrical output and not associated with MSS activities as defined in this Special Condition and Attachments A and B is authorized to accommodate periods of reduced power demand provide the maximum pounds per hour (lbs/hr) emission rates specified in the attached MAERT are not exceeded. **(2/19)**
  - E. Emissions from planned maintenance activities (Attachments A and B) are excluded.
  - F. The concentrations limits specified in Special condition No 5 do not apply to clock hours during which reduced load operation or MSS activities occur
  - G. If the turbine operates in MSS mode during any part of a clock hour, the only applicable limit for that hour is the MSS pounds per hour (lb/hr) limit specified in the MAERT

**Simple Cycle CTG Standards – less than or equal to 2,750 operating hours per year (hr/yr)**

7. The concentration of emissions for each CTG during loads greater than 11 MW of gross electrical output shall not exceed the following emission limits expressed in ppmvd correct to 15% O<sub>2</sub>, subject to the specifications in Special Condition No. 10.

EPN	Pollutant	Concentration	Averaging time
SH1 – SH4, SH6, and SH7	NO <sub>x</sub>	5.0	1-hr average
	CO	43.0	
SH1 – SH4	VOC	8.0	
SH6 – SH7		6.8	
SH1 – SH4, SH6, and SH7	NH <sub>3</sub>	10.0	

**Simple Cycle CTG Standards – greater than 2,750 operating hours per year**

8. The operation of each CTG shall not exceed 2,750 hours of operation per year until: **(9/08)**
  - A. A CO catalyst unit has been installed on the simple cycle turbine.
  - B. The simple cycle CTG has demonstrated compliance with emission standard specified in Special Condition No. 9, using the sampling methods as specified in Special Condition No. 21.
  - C. When both Special Condition No. 8A and 8B have been met, the simple cycle turbines will be authorized for 8,760 hours of operation per year.
  
9. The concentration of emissions for each CTG during loads greater than 11 MW of gross electrical output shall not exceed the following emission limits expressed in ppmvd correct to 15% O<sub>2</sub>, when all the conditions under Special Condition No 8C are met, subject to the specifications in Special Condition No. 10.

EPN	Pollutant	Concentration	Averaging time
SH1 – SH4, SH6, and SH7	NO <sub>x</sub>	5.0	1-hr average
	CO	9.0	
SH1 – SH4	VOC	8.0	
SH6 – SH7		2.0	
SH1 – SH4, SH6, and SH7	NH <sub>3</sub>	10.0	

10. The following activities are excluded from the emission standards of Special Condition Nos. 7 and 9. **(2/19)**
  - A. Startup of the CTG, defined as the period that begins when fuel flow is first detected and ends when unit's corrected stack NO<sub>x</sub> ppmvd concentration at 15% O<sub>2</sub> drops below 5 ppmvd and remains there for 5 minutes. A startup event shall not exceed 120 minutes after fuel flow has been detected, except as allowed in Special Condition No. 10B.
  - B. Extended startup of the CTG, defined as a startup that is greater than 120 minutes after fuel flow has been detected. Two extended starts are authorized per calendar year per unit and shall not exceed 3 hours per event.
  - C. Shutdown of the CTG, defined as the period when the load on the unit drops below 11 MW of gross electrical output and ends when fuel is no longer fed to the unit. A shutdown shall not exceed 120 minutes per event.
  - D. Reduced load operations below 11 MW of gross electrical output and not associated with MSS as defined in this Special Condition and Attachments A and B is authorized to accommodate periods of reduced power demand provide the maximum pounds per hour (lbs/hr) emission rates specified in the attached MAERT are not exceeded. **(2/19)**
  - E. The concentration limits do not apply to clock hours during which reduced load operations or MSS activities, including the activities in Attachments A and B occur.
  - F. If the turbine operates in MSS mode during any part of the clock hour, the only applicable emission limit for that hour is the MSS lb/hour limit specified in the MAERT

### Additional Operational Requirements

#### 11. Opacity

- A. During normal operations, opacity of emissions from each CTG stack authorized by this permit shall not exceed 5 percent averaged over a six-minute period. During periods of MSS operation of the turbines, the opacity shall not exceed 15 percent averaged over a six-minute period.
- B. Opacity of emissions from EPNs: SC-VNTS and CC-VNTS (Attachment C) shall not exceed 20 percent as required by Title 30 Texas Administrative Code (30 TAC) §111.111(a)(1)(B), except for those periods described in 30 TAC § 111.111(a)(1)(E).
- C. The permit holder shall demonstrate compliance with this Special Condition in accordance with the following procedures:
  - (1) Visible emission observations shall be conducted and recorded at least once during each calendar quarter while the facilities are in operation, unless the emission unit is not operating for the entire calendar quarter.
  - (2) These observations 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(s). Up to three emissions points may be read concurrently, provided that all three emissions points are within a 70-degree viewing sector or angle in front of the observer such that the proper sun position (at the observer's back) can be maintained for all three emission points. A certified opacity reader is not required for these visible emission observations.
  - (3) 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.
  - (4) If no visible emissions are present during the observations conducted as specified in this Special Condition, then compliance with the opacity limit will have been demonstrated.
  - (5) If visible emissions are present, the permit holder shall perform one of the following within 24 hours:
    - (a) Assume that an exceedance of the applicable opacity limit specified in this Special Condition has occurred, or;
    - (b) Conduct and record an opacity observation as determined by Title 40, Code of Federal Regulations (40 CFR) Part 60, Appendix A, Reference Method (RM) 9 to determine if an exceedance of the opacity limit of this Special Condition has occurred.
  - (6) If an exceedance has occurred, take corrective action within 48 hours. Record the exceedance as an emissions event as specified in 30 TAC, Chapter 101.

- 12. Chromium-based solutions shall not be used in the Cooling Towers (EPNs: CLTWR-1 and SC CTWR-1 to SC CTWR-4). **(4/12)**



13. The testing of the Emergency Diesel Generator shall be limited to one hour per day.

#### **Fuel Specifications**

14. Fuel for each of the CTGs is limited to pipeline-quality natural gas containing no more than 0.23 grain of total sulfur per 100 dry standard cubic feet on an annual average basis.
15. The emergency generator shall be limited to diesel fuel containing no more than 15 ppm sulfur by weight. **(2/19)**
16. Upon request by the Executive Director of the Texas Commission on Environmental Quality (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 gas turbines and duct burners or shall allow air pollution control agency representatives to obtain a sample for analysis.

#### **Aqueous Ammonia**

17. The service of ammonia (NH<sub>3</sub>) storage tanks represented in this permit is limited to the storage of aqueous NH<sub>3</sub> only.
18. Emissions from the NH<sub>3</sub> storage tanks shall be minimized by use of a vapor-balance system to route vapors displaced from the tanks back to the truck during filling operations.
19. Audio, visual, and olfactory (AVO) checks for NH<sub>3</sub> and water treatment chemicals shall be made once per shift within the operating area. No later than one hour following detection of a leak, plant personnel shall take the following actions:
  - A. Locate and isolate the leak.
  - B. Commence repair or replacement of the leaking component as appropriate.
  - C. Use a leak collection/containment system to control the leak until repair or replacement can be made.

#### **Initial Determination of Compliance**

20. 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. **(9/08)**
21. 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: SH1 to SH7. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA RMs 201A and 202 or RM 5, modified to include back-half condensables, for the concentration of PM<sub>10</sub>; RM 8 or RM 6 or 6c for sulfur dioxide (SO<sub>2</sub>); RM 9 for opacity (consisting of 30 six-minute readings as provided in 40 CFR § 60.11[b]); RM 10 for the concentration of CO, RM 25A, modified to exclude methane and ethane, for the concentration of VOC (to measure total carbon as propane); and RM 20 for the concentrations of NO<sub>x</sub> and O<sub>2</sub> or equivalent methods. **(2/19)**

Fuel sampling using the methods and procedures of 40 CFR Part 60, Subpart GG may be conducted in lieu of stack sampling for SO<sub>2</sub> (for turbines EPNs: SH1 to SH5). If fuel sampling is used, compliance with New Source Performance Standards (NSPS), Subpart GG, SO<sub>2</sub> limits shall be based on 100 percent conversion of the sulfur in the fuel to SO<sub>2</sub>. Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling. The TCEQ Executive Director or a designated representative shall be afforded the opportunity to observe all such sampling. **(9/08)**

Fuel sampling (for CTGs EPNs: SH6 and SH7) using methods and procedures of 40 CFR Part 60, Subpart KKKK may be conducted in lieu of stack sampling for SO<sub>2</sub> or the permit holder may be exempted from fuel monitoring of SO<sub>2</sub> as provided under 40 CFR § 60.4365(a). If fuel sampling is used, compliance with NSPS, Subpart KKKK, SO<sub>2</sub> limits shall be based on 100 percent conversion of the sulfur in the fuel to SO<sub>2</sub>. Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling. The TCEQ Executive Director or a designated representative shall be afforded the opportunity to observe all such sampling. **(2/19)**

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 30 days prior to sampling to schedule a pretest meeting. The notice shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) 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 TCEQ or the 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 Air Permits Division. Test waivers and alternate or equivalent procedure proposals for NSPS testing which must have the EPA approval shall be submitted to the TCEQ Regional Office.

B. Air contaminants and diluents to be sampled and analyzed include (but are not limited to) NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM<sub>10</sub>, NH<sub>3</sub>, opacity, and O<sub>2</sub>. (As noted above, fuel sampling using the methods and procedures of 40 CFR Part 60, Subparts GG and KKKK may be conducted in lieu of stack sampling for SO<sub>2</sub>). The PM<sub>10</sub> from EPN: SH 5 shall be tested at one point in the permitted operating range while the gas turbine is operating as close to base load as possible and while the duct burners are operating at their maximum firing rate.

- C. Each gas turbine shall be tested at a minimum (VOC only) and maximum load of the permitted operating range that is defined in Special Condition No. 6 for the atmospheric conditions which exist during testing. The duct burners shall be tested at its maximum firing rate while the turbine is operating as close to base load as possible. 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 NSPS, Subparts Da, GG and KKKK. **(05/08)**
- D. Sampling as required by this condition shall occur within 60 days after achieving the maximum fuel-firing rate at which the gas turbines and duct burners will be operated but no later than 180 days after initial start-up of the unit. Additional sampling shall occur as may be required by the TCEQ or the EPA. **(9/08)**
- E. The City of Austin (d.b.a. Austin Energy), may furnish previous testing results for the simple cycle CTGs that satisfy any of the requirements of this special condition in lieu of actual testing as long as the previous testing results demonstrate compliance. **(9/08)**
- F. Within 60 days after the completion of the testing and sampling required herein, two copies of the sampling reports, including any sampling reports as described in Special Condition:
  - (1) One copy to the EPA Region 6 Office, Dallas.
  - (2) One copy to the TCEQ Austin Regional Office.
- G. The initial emission testing requirement of this condition was completed on the following dates: **(4/12)**
  - (1) June 2001: SH1, SH2, and SH3
  - (2) August 2001: SH4
  - (3) January 2005: SH5
  - (4) August 2010: SH7
  - (5) October 2010: SH6

### **Continuous Determinations of Compliance**

- 22. The holder of this permit shall install, calibrate, maintain, and operate a Continuous Emissions Monitoring System (CEMS) to measure and record the concentrations of NO<sub>x</sub> from each CTG (EPNs: SH1 through SH7), CO from (EPN: SH5), and diluent gases [O<sub>2</sub> or carbon dioxide (CO<sub>2</sub>)], from each CTG Exhaust Stack (EPNs: SH1 through SH7). **(2/19)**
  - A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR § 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met. The CEMS shall comply with the following requirements:

The holder of this permit shall assure that the CEMS meets the applicable quality assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative such as the quality-assurance procedures outlined in 40 CFR Part 75, Appendix B for NO<sub>x</sub> and O<sub>2</sub>. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3 and any CEMS downtime and all cylinder gas audit exceedances of ±15 percent

accuracy shall be reported quarterly to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. For the CO CEMS, cylinder gas audits may be conducted in all four calendar quarters in lieu of annual Relative Accuracy Test Audit. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director. **(4/12)**

- B. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - C. All monitoring data and quality-assurance data shall be maintained by the source for a period of two years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS may be used to determine compliance with the conditions of this permit. Hourly average concentrations from EPNs: SH1 to SH7 shall be summed to tons per year and used to determine compliance with the emission limits of this permit. **(2/19)**
  - D. The appropriate TCEQ 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.
  - E. The CEMS for the turbines/duct burner stacks are required to meet the design and performance specifications, pass the field tests, and meet the installation requirements and data analysis and reporting requirements specified in the applicable performance specifications in 40 CFR Part 75, Appendix A.
23. If any emission monitor fails to meet specified performance, it shall be repaired or replaced as soon as reasonably possible. The replacement procedure should start immediately and any replacement parts should be installed within 30 days (any extension or deviation requires approval from the TCEQ Austin Regional Office). **(9/08)**
24. The holder of this permit shall additionally install, calibrate, maintain, and operate continuous monitoring systems to monitor and record the average hourly natural gas consumption of the gas turbines and the duct burner. The systems shall be accurate to  $\pm 5.0$  percent of the unit's maximum flow and the City of Austin (d.b.a. Austin Energy) shall provide documentation to verify this accuracy. **(9/08)**
25. The holder of this permit shall either measure or develop a program to calculate the total mass flow rate through the HRSG stack to ensure continuous compliance with the emission limitations specified in the attached MAERT." The permit holder shall calculate hourly mass emissions in lbs/hr using the measured or calculated exhaust flow rate and the measured concentrations of NO<sub>x</sub> and CO from the CEMS required in Special Condition No. 22. The hourly calculated values will be cumulatively added during each hour of the month and stored on a computer hard drive and on computer disk or other TCEQ-accepted computer media. Records of this information shall also be available in a form suitable for inspection. **(9/08)**

#### **Ammonia Continuous Demonstration of Compliance**

26. The NH<sub>3</sub> concentration in each CTG exhaust stack (EPNs: SH1 through SH7) shall be monitored as per subparagraph A below for all periods when Units 1 through 7 are in operation. **(2/19)**

- A. The holder of this permit shall install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS and the other exhaust stream would be routed through an NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> slip concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with Special Conditions Nos.5, 7, and 9. **(2/19)**
- B. Any other method used for measuring NH<sub>3</sub> slip shall require prior approval from the TCEQ Regional Director. **(9/08)**

**MSS Compliance (4/12)**

- 27. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
  - A. Use of a CEMS. The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or 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.
  - D. Use of emissions testing data collected during a planned maintenance 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.
- 28. Compliance with the emissions limits for planned maintenance activities identified in this permit shall be demonstrated as follows.
  - A. Inherently Low Emitting (ILE)s (Attachment A)
    - (1) The total emissions from all ILE planned maintenance activities shall be considered to be no more than the estimated potential to emit for those activities that are represented in the permit amendment application dated December 21, 2010 and subsequent associated submittals.
    - (2) The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the permit amendment application dated December 21, 2010 and subsequent associated submittals.
  - B. For each pollutant emitted during non-ILE planned maintenance activities (Attachment B), the permit holder shall do the following for each calendar month.
    - (1) Determine the total emissions of the pollutant that result from such non-ILE planned maintenance activities in accordance with the methods listed in Special Condition No. 27.

- (2) Compare the pollutant's short-term (hourly) emissions during planned maintenance activities, as determined using one of the methods listed in Special Condition No. 27, to the applicable short-term planned MSS emissions limit in the MAERT.
- (3) Once the pollutant's emissions during planned maintenance activities have been measured for 12 months after the MSS permit amendment is issued, compare the rolling 12-month emissions of the pollutant, as determined using the monthly emission totals, to the applicable annual planned MSS emissions limit in the MAERT.

### Recordkeeping Requirements

29. The following records shall be kept at the Austin Energy corporate headquarters located at 721 Barton Springs Road, Austin, Texas, 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 November 28, 2007, and subsequent representations.
  - C. A complete copy of the testing reports and records of the initial performance testing completed pursuant to Special Condition No. 21 to demonstrate initial compliance. **(9/08)**
  - 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.
30. The following information shall be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and shall be made immediately available upon request to representatives of the TCEQ, the EPA, or any local air pollution control program having jurisdiction:
  - A. The CEMS data of NO<sub>x</sub> (EPNs: SH1 through SH7), CO (EPN: SH5), and O<sub>2</sub> emissions (EPNs: SH1 through SH7) to demonstrate compliance with the emission rates listed in the Special Condition Nos. 5, 7, and 9, and the MAERT. **(2/19)**
  - B. Raw data files of all CEMS data including calibration checks and adjustments and maintenance performed on these systems in a permanent form suitable for inspection.
  - C. Records of the hours of operations and average daily quantity of natural gas fired in the turbines and duct burners.
  - D. Records of NH<sub>3</sub> (differential NO<sub>x</sub> analyzer) quality assurance checks. **(9/08)**
  - E. Records of fuel sampling conducted pursuant to 40 CFR Part 60, Subpart GG, Subpart KKKK, or a valid purchase contract.
  - F. Startup/shutdown records for all CTGs shall include the following: **(4/12)**
    - (1) Quantity of fuel used.
    - (2) Emissions from the event.
    - (3) Date, time and duration of the event.
  - G. Records of the maintenance activities listed on Attachments A and B. **(4/12)**

- H. Pursuant to Special Condition No. 28A, the annual confirmation shall be kept with examples of the method of data reduction including units, conversion factors, assumptions, and the basis of the assumptions as represented in the application dated December 21, 2010 and subsequent associated submittals. **(4/12)**
  
- 31. With the exceptions of the emission limits in the MAERT attached to this permit, the permit conditions relating to planned MSS activities do not become effective until 180 days after issuance of this permit amendment dated April 20, 2012. **(4/12)**

Date: December 6, 2021

Attachment A

Permit Numbers 48106 and PSDTX1012M2

<b>Inherently Low Emitting Sources (EPN: ILEMSS)</b>					
<b>Activity</b>	<b>Emissions</b>				
	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>	<b>PM</b>	<b>NH<sub>3</sub></b>
Catalyst handling and maintenance <sup>1</sup>				X	
Management of sludge pits, ponds, sumps, and water conveyances <sup>2</sup>			X		
CEMS and Analytical Equipment Repair/ Maintenance/Calibration	X	X	X		
Miscellaneous Brazing, Soldering and Welding	X	X	X	X	
Parts Cleaner			X		
Aqueous ammonia injection system					X

Date: August 6, 2012

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<sup>1</sup> Includes, but is not limited to replacement, cleaning, activation, and deactivation of SCR and oxidation catalyst.

<sup>2</sup> Includes, but is not limited to management by vacuum truck/dewatering of material in open pits, ponds, sumps, tanks, and other closed or open vessels. Material managed includes water/sludge materials containing miscellaneous VOCs such as diesel, lube oil, and other waste materials.



## Attachment B

Permit Numbers 48106 and PSDTX1012M2

Non-inherently Low Emitting Sources (EPN: non-ILEs)								
Activity	EPN	Emissions						Exempt Solvent
		NO <sub>x</sub>	CO	VOC	PM	NH <sub>3</sub>	SO <sub>2</sub> /H <sub>2</sub> S	
Turbine washing - online <sup>3</sup>	SH5				X			
Combustion Optimization <sup>4</sup>	SH1 thru SH7	X	X	X	X		X	
Diagnostic Water/Ammonia Injection System Activities <sup>5</sup>	SH1 thru SH7	X	X	X	X	X	X	
Painting <sup>6</sup>	MSSFUG			X	X			X
Gaseous Fuel Venting <sup>7</sup>	MSSFUG			X			X	
Outdoor/unenclosed dry abrasive blasting	MSSFUG				X			

Date: February 15, 2019


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<sup>3</sup> This process involves the use of water only.

<sup>4</sup> Includes, but is not limited to the following: (a) leak and operability checks (e.g. turbine over-speed test, trouble shooting). (b) Balancing. (c) Tuning activities that occur during seasonal tuning or after initial construction, a combustor change out, a major repair/maintenance to a combustor, or other similar circumstances.

<sup>5</sup> Includes, but is not limited to the following: trouble shooting inputs, power supply, injection pumps, sensors, and other component checks.

<sup>6</sup> Includes, but is not limited to the application of adhesives and rubber linings.

<sup>7</sup> Includes, but is not limited to venting associated with pipeline pigging and meter proving

## Attachment C

Permit Numbers 48106 and PSDTX1012M2

This permit authorizes maintenance emissions from the following groups. The headings for each group of facilities are used on the MAERT to identify all facilities in the respective group.

<b>EPN: SC-VNTS</b>		
Description	Vents	FIN
Simple Cycle Turbines Oil Circulating System Vents	Generator Lube Oil	SH-VNT-1A thru 4A SH-VNT-6A thru 7A
	Bearing Lube Oil Sump	SH-VNT-1B thru 4B SH-VNT-6B thru 7B
	Lube Oil Reservoir	SH-VNT-1C thru 4C SH-VNT-6C thru 7C
	Hydraulic Oil Starter	SH-VNT-1D thru 4D SH-VNT-6D thru 7D

<b>EPN: CC-VNTS</b>		
Description	Vents	FIN
Combined Cycle Turbine Oil Circulating System Vents	Hydraulic Oil/Lube	SH-VNT-5A
	Generator Seal Oil	SH-VNT-5B
	Lube Oil	SH-VNT-5C

<b>EPN: WTTNKS</b>	
Description	FIN
Nalco 7408 (PC-11)	SH-TNK20
Nalco 71-D5	SH-TNK21
Nalco 73551	SH-TNK22
Nalco Core Shell 71301	SH-TNK23
Nalco Naclear 7768 Flocculant	SH-TNK25
Nalco Trascar 107	SH-TNK26
Nalco H550	SH-TNK49
Sulfuric Acid	SH-TNK50
Clarifier <sup>8</sup>	SH-CLARIFY

<b>EPN: OILRES</b>	
Description	FIN
Circulating Water Pump Lube Oil Reservoir	SH-TNK41 SH-TNK42

<sup>8</sup> Emission from management of South Austin Regional (SAR) Wastestream.

	SH-TNK43
Unit 5 Gas Compressor Oil Reservoir	SH-TNK44

EPN: WASHTNKS	
Description	FIN
Underground Wash Water Tanks	SH-TNK8 thru SH-TNK12
Oil-Water Separator Tank (for units 1 thru 4) for Spent Wash Water	SH-TNK45
Surge Tank	SH-TNK45A
Reject Tank for Oil/Water Separator Membrane	SH-TNK46
Underground Wash Water Tank (for unit 5)	SH-TNK47
Oil-Water Separator Tank	SH-TNK48
Underground Wash Water Tank (for unit 8)	SH-TNK52

Date: February 15, 2019

## Sources - Maximum Allowable Emission Rates

Permit Number 48106 and PSDTX1012M2

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 (16)	TPY (4)
SH1	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9
		NO <sub>x</sub> (MSS)	203.7	-
		CO	44.2	60.8
		CO (MSS)	923.0	-
		VOC	4.1	5.6
		VOC (MSS)	17.6	-
		PM	4.0	5.5
		PM <sub>10</sub>	4.0	5.5
		PM <sub>2.5</sub>	4.0	5.5
		SO <sub>2</sub>	0.3	0.5
		NH <sub>3</sub>	6.4	6.1
SH1	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub>	8.6	37.8
		NO <sub>x</sub> (MSS)	203.7	-
		CO	9.5	41.4
		CO (MSS)	923.0	-
		VOC	1.2	5.3
		VOC (MSS)	17.6	-
		PM	4.0	17.5
		PM <sub>10</sub>	4.0	17.5
		PM <sub>2.5</sub>	4.0	17.5
		SO <sub>2</sub>	0.3	1.5
		NH <sub>3</sub>	6.4	19.6

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (16)	TPY (4)
SH2	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9
		NO <sub>x</sub> (MSS)	203.7	-
		CO	44.2	60.8
		CO (MSS)	923.0	-
		VOC	4.1	5.6
		VOC (MSS)	17.6	-
		PM	4.0	5.5
		PM <sub>10</sub>	4.0	5.5
		PM <sub>2.5</sub>	4.0	5.5
		SO <sub>2</sub>	0.3	0.5
		NH <sub>3</sub>	6.4	6.1
SH2	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub>	8.6	37.8
		NO <sub>x</sub> (MSS)	203.7	-
		CO	9.5	41.4
		CO (MSS)	923.0	-
		VOC	1.2	5.3
		VOC (MSS)	17.6	-
		PM	4.0	17.5
		PM <sub>10</sub>	4.0	17.5
		PM <sub>2.5</sub>	4.0	17.5
		SO <sub>2</sub>	0.3	1.5
		NH <sub>3</sub>	6.4	19.6

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (16)	TPY (4)
SH3	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9
		NO <sub>x</sub> (MSS)	203.7	-
		CO	44.2	60.8
		CO (MSS)	923.0	-
		VOC	4.1	5.6
		VOC (MSS)	17.6	-
		PM	4.0	5.5
		PM <sub>10</sub>	4.0	5.5
		PM <sub>2.5</sub>	4.0	5.5
		SO <sub>2</sub>	0.3	0.5
		NH <sub>3</sub>	6.4	6.1
SH3	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub>	8.6	37.8
		NO <sub>x</sub> (MSS)	203.7	-
		CO	9.5	41.4
		CO (MSS)	923.0	-
		VOC	1.2	5.3
		VOC (MSS)	17.6	-
		PM	4.0	17.5
		PM <sub>10</sub>	4.0	17.5
		PM <sub>2.5</sub>	4.0	17.5
		SO <sub>2</sub>	0.3	1.5
		NH <sub>3</sub>	6.4	19.6

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (16)	TPY (4)
SH4	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9
		NO <sub>x</sub> (MSS)	203.7	-
		CO	44.2	60.8
		CO (MSS)	923.0	-
		VOC	4.1	5.6
		VOC (MSS)	17.6	-
		PM	4.0	5.5
		PM <sub>10</sub>	4.0	5.5
		PM <sub>2.5</sub>	4.0	5.5
		SO <sub>2</sub>	0.3	0.5
		NH <sub>3</sub>	6.4	6.1
SH4	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub>	8.6	37.8
		NO <sub>x</sub> (MSS)	203.7	-
		CO	9.5	41.4
		CO (MSS)	923.0	-
		VOC	1.2	5.3
		VOC (MSS)	17.6	-
		PM	4.0	17.5
		PM <sub>10</sub>	4.0	17.5
		PM <sub>2.5</sub>	4.0	17.5
		SO <sub>2</sub>	0.3	1.5
		NH <sub>3</sub>	6.4	19.6

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (16)	TPY (4)
SH5	GE 7FA + 681 MMBtu/hr DB (~ 164 MW) (5)	NO <sub>x</sub>	46.7	191.4
		NO <sub>x</sub> (MSS)	247.0	-
		CO	98.4	403.3
		CO (MSS)	2,200.0	-
		VOC	16.4	67.4
		VOC (MSS)	150.0	-
		PM	32.8	134.5
		PM <sub>10</sub>	32.8	134.5
		PM <sub>2.5</sub>	32.8	134.5
		SO <sub>2</sub>	1.6	7.3
		NH <sub>3</sub>	34.6	99.0
		NH <sub>3</sub> (MSS)	65.0	



Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (16)	TPY (4)
SH6	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9
		NO <sub>x</sub> (MSS)	203.7	-
		CO	44.2	60.8
		CO (MSS)	923.0	-
		VOC	4.1	5.6
		VOC (MSS)	17.6	-
		PM	4.0	5.5
		PM <sub>10</sub>	4.0	5.5
		PM <sub>2.5</sub>	4.0	5.5
		SO <sub>2</sub>	0.3	0.5
		NH <sub>3</sub>	6.4	6.1
SH6	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub>	8.6	37.8
		NO <sub>x</sub> (MSS)	203.7	-
		CO	9.5	41.4
		CO (MSS)	923.0	-
		VOC	1.2	5.3
		VOC (MSS)	17.6	-
		PM	4.0	17.5
		PM <sub>10</sub>	4.0	17.5
		PM <sub>2.5</sub>	4.0	17.5
		SO <sub>2</sub>	0.3	1.5
		NH <sub>3</sub>	6.4	19.6

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (16)	TPY (4)
SH7	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (≤ 2,750 hrs/yr)	NO <sub>x</sub>	8.6	11.9
		NO <sub>x</sub> (MSS)	203.7	-
		CO	44.2	60.8
		CO (MSS)	923.0	-
		VOC	4.1	5.6
		VOC (MSS)	17.6	-
		PM	4.0	5.5
		PM <sub>10</sub>	4.0	5.5
		PM <sub>2.5</sub>	4.0	5.5
		SO <sub>2</sub>	0.3	0.5
		NH <sub>3</sub>	6.4	6.1
SH7	GE LM 6000 – Simple Cycle (5) (~ 50 MW) (> 2,750 hr/yr)	NO <sub>x</sub>	8.6	37.8
		NO <sub>x</sub> (MSS)	203.7	-
		CO	9.5	41.4
		CO (MSS)	923.0	-
		VOC	1.2	5.3
		VOC (MSS)	17.6	-
		PM	4.0	17.5
		PM <sub>10</sub>	4.0	17.5
		PM <sub>2.5</sub>	4.0	17.5
		SO <sub>2</sub>	0.3	1.5
		NH <sub>3</sub>	6.4	19.6

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (16)	TPY (4)
HTR-01	Inlet Air Heaters	NO <sub>x</sub>	0.49	0.25
		CO	0.41	0.21
		VOC	0.03	0.01
		PM	0.04	0.02
		PM <sub>10</sub>	0.04	0.02
		SO <sub>2</sub>	<0.01	<0.01
HTR-02	Inlet Air Heaters	NO <sub>x</sub>	0.49	0.25
		CO	0.41	0.21
		VOC	0.03	0.01
		PM	0.04	0.02
		PM <sub>10</sub>	0.04	0.02
		SO <sub>2</sub>	<0.01	<0.01
HTR-03	Inlet Air Heaters	NO <sub>x</sub>	0.49	0.25
		CO	0.41	0.21
		VOC	0.03	0.01
		PM	0.04	0.02
		PM <sub>10</sub>	0.04	0.02
		SO <sub>2</sub>	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (16)	TPY (4)
SC CTWR-1	Simple Cycle Cooling Tower 1	VOC	2.20	0.05
		PM	0.21	0.42
		PM <sub>10</sub>	0.14	0.29
		PM <sub>2.5</sub>	<0.01	<0.01
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01
		HOCl	0.02	<0.01
SC CTWR-2	Simple Cycle Cooling Tower 2	VOC	2.20	0.05
		PM	0.21	0.42
		PM <sub>10</sub>	0.14	0.29
		PM <sub>2.5</sub>	<0.01	<0.01
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01
		HOCl	0.02	<0.01
SC CTWR-3	Simple Cycle Cooling Tower 3	VOC	2.20	0.05
		PM	0.21	0.42
		PM <sub>10</sub>	0.14	0.29
		PM <sub>2.5</sub>	<0.01	<0.01
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01
		HOCl	0.02	<0.01

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (16)	TPY (4)
SC CTWR-4	Simple Cycle Cooling Tower 4	VOC	1.85	0.04
		PM	0.03	0.06
		PM <sub>10</sub>	0.02	0.04
		PM <sub>2.5</sub>	<0.01	<0.01
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01
		HOCl	<0.01	<0.01
CLTWR-1	Combined Cycle Cooling Tower 1	VOC	0.88	1.54
		PM	2.74	12.0
		PM <sub>10</sub>	0.84	3.69
		PM <sub>2.5</sub>	0.01	0.02
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01
		HOCl	0.53	0.15
SC PB FUG	Simple Cycle Power Block Fugitives (7)	VOC	0.01	0.06
		H <sub>2</sub> S	<0.01	<0.01
SC MS FUG	Simple Cycle Natural Gas Meter Skid (7)	VOC	0.05	0.21
		H <sub>2</sub> S	<0.01	<0.01
CC PB FUG	Combined Cycle Power Block Fugitives (7)	VOC	0.02	0.07
		H <sub>2</sub> S	<0.01	<0.01
CC MS FUG	Combined Cycle Natural Gas Meter Skid (7)	VOC	0.05	0.22
		H <sub>2</sub> S	<0.01	<0.01
SC AMFUG	Simple Cycle Ammonia Fugitives (7)	NH <sub>3</sub>	0.25	1.11
CC AMFUG	Combined Cycle Ammonia Fugitives (7)	NH <sub>3</sub>	0.11	0.47
TANK 5-4	Oil/Water Separator	VOC	0.05	0.01

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (16)	TPY (4)
EDG	Emergency Diesel Generator	NO <sub>x</sub>	7.3	3.2
		CO	1.4	0.6
		VOC	0.37	0.14
		PM	0.2	0.1
		PM <sub>10</sub>	0.2	0.1
		SO <sub>2</sub>	<0.01	<0.01
SC-VNTS	Simple Cycle Oil Vents (6)	PM <sub>10</sub>	0.14	0.62
		VOC	0.28	1.24
CC-VNTS	Combined Cycle Oil Vents (6)	PM <sub>10</sub>	0.02	0.09
		PM <sub>2.5</sub>	0.02	0.09
		VOC	0.04	0.18
WTTNKS	Water Treatment Chemical Storage Tanks (6)	VOC	0.41	1.34
		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01
		NH <sub>3</sub>	0.10	0.46
OILRES	Circulating Water Pump/Gas (6) Compressor Lube Oil Reservoir	VOC	<0.01	<0.01
WASHTNKS	Underground Wash Water Tanks (6)	VOC	0.04	0.01
MSSFUG	Non-ILE Maintenance Activities Attachment B (7)	VOC	90.04	3.00
		PM <sub>10</sub>	1.12	0.18
		PM <sub>2.5</sub>	0.17	0.03
		H <sub>2</sub> S	0.02	<0.01
		Exempt Solvent	0.01	0.04

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (16)	TPY (4)
ILEMSS	ILE Maintenance Activities Attachment A (7)	NO <sub>x</sub>	0.32	0.70
		CO	0.18	0.40
		VOC	0.13	0.14
		PM <sub>10</sub>	0.03	0.05
		PM <sub>2.5</sub>	0.03	0.05
		NH <sub>3</sub>	0.20	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) NO<sub>x</sub> - total oxides of nitrogen
- CO - carbon monoxide
- VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>
- PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>
- PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
- SO<sub>2</sub> - sulfur dioxide
- HOCl - hypochlorous acid
- H<sub>2</sub>S - hydrogen sulfide
- H<sub>2</sub>SO<sub>4</sub> - sulfuric acid
- MSS - maintenance, startup, and shutdown

(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.

(5) For each pollutant whose emissions are measured during planned MSS activities using a CEMS, only the MSS lb/hr limits apply during each clock hour that includes one or more minutes of MSS activities. During all other clock hours, the normal lb/hr limits apply.

(6) See Attachment C in the Special Conditions for the emission points included in each grouping.

(7) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: December 6, 2021