FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO Petra Nova Parish Holdings LLC

AUTHORIZING THE OPERATION OF WA Parish Electric Generating Station – Carbon Capture Plant Carbon Capture Plant Fossil Fuel Electric Power Generation

LOCATED AT

Fort Bend County, Texas Latitude 29° 28' 31" Longitude 95° 38' 3" Regulated Entity Number: RN100888312

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: <u>03611</u>Issuance Date: _____

For the Commission

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General Terms and Conditions

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

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

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

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

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

Special Terms and Conditions:

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

- 1. Permit holder shall comply with the following requirements:
 - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
 - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.
 - C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
 - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
 - E. Emission units subject to 40 CFR Part 63, Subparts YYYY or ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113,

Subchapter C, §§ 113.1080 or 113.1090, respectively, which incorporate the 40 CFR Part 63 Subparts by reference.

- F. The permit holder shall comply with the following 30 TAC Chapter 101, Subchapter H, Division 3 (Mass Emission Cap and Trade Program) Requirements:
 - (i) Title 30 TAC § 101.352 (relating to General Provisions)
 - (ii) Title 30 TAC § 101.353 (relating to Allocation of Allowances)
 - (iii) Title 30 TAC § 101.354 (relating to Allowance Deductions)
 - (iv) Title 30 TAC § 101.356 (relating to Allowance Banking and Trading)
 - (v) Title 30 TAC § 101.359 (relating to Reporting)
 - (vi) Title 30 TAC § 101.360 (relating to Level of Activity Certification)
 - (vii) The terms and conditions by which the emission limits are established to meet or exceed the cap are applicable requirements of this permit
- 2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
 - A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
 - B. Title 30 TAC § 101.3 (relating to Circumvention)
 - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
 - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
 - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
 - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
 - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
 - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
 - I. Title 30 TAC § 101.222 (relating to Demonstrations)
 - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
- 3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
 - A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit

holder shall comply with the following requirements for stationary vents at the site subject to this standard:

- (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(1)(E)
- (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
- (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:
 - (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
 - (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.
 - (3) Records of all observations shall be maintained.
 - Visible emissions observations of emission units operated during daylight (4) 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:
 - If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.
 - (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.
- B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:
 - (i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)
 - (ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)
 - (iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
 - (1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.
 - (2) Records of all observations shall be maintained.

- (3) Visible emissions observations of air emission sources or enclosed facilities operated during davlight 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 eves. 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:
 - 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).
 - However, if visible emissions are present during the observation, (b) the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.
- C. For visible emissions from all other sources not specified in 30 TAC § 111.111(a)(1), (4), or (7); the permit holder shall comply with the following requirements:
 - (i) Title 30 TAC § 111.111(a)(8)(A) (relating to Requirements for Specified Sources)
 - (ii) Title 30 TAC § 111.111(a)(8)(B)(i) or (ii)
 - (iii) For a source subject to 30 TAC § 111.111(a)(8)(A), complying with 30 TAC § 111.111(a)(8)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

- (1) An observation of visible emissions from a source which is required to comply with 30 TAC § 111.111(a)(8)(A) shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter.
- (2) Records of all observations shall be maintained.
- (3) Visible emissions observations of sources operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of sources operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each source during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
- (4) Compliance Certification:
 - If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(8) and (a)(8)(A)
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(8)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.
- D. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
- E. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).

- F. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
 - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
 - (ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)
 - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)
- G. Outdoor burning, as stated in 30 TAC § 111.201, shall not be authorized unless the following requirements are satisfied:
 - (i) Title 30 TAC § 111.205 (relating to Exception for Fire Training)
 - (ii) Title 30 TAC § 111.207 (relating to Exception for Recreation, Ceremony, Cooking, and Warmth)
 - (iii) Title 30 TAC § 111.209 (relating to Exception for Disposal Fires)
 - (iv) Title 30 TAC § 111.219 (relating to General Requirements for Allowable Outdoor Burning)
 - (v) Title 30 TAC § 111.221 (relating to Responsibility for Consequences of Outdoor Burning)
- 4. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:
 - A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)
 - B. Title 40 CFR § 60.8 (relating to Performance Tests)
 - C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)
 - D. Title 40 CFR § 60.12 (relating to Circumvention)
 - E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
 - F. Title 40 CFR § 60.14 (relating to Modification)
 - G. Title 40 CFR § 60.15 (relating to Reconstruction)
 - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)
- 5. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

Additional Monitoring Requirements

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

New Source Review Authorization Requirements

- 7. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule (including the terms, conditions, monitoring, recordkeeping, and reporting identified in registered PBRs and permits by rule identified in the PBR Supplemental Tables dated August 30, 2024 in the application for project 37082), standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
 - A. Are incorporated by reference into this permit as applicable requirements
 - B. Shall be located with this operating permit
 - C. Are not eligible for a permit shield
- 8. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
- 9. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

10. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period

may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.

- 11. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:
 - A. The permit holder shall comply with the compliance schedules and submit written notification to the Executive Director as required in 30 TAC Chapter 117, Subchapter H, Division 1:
 - (i) For electric utilities in the Houston-Galveston-Brazoria Nonattainment area, 30 TAC § 117.9120
- 12. Use of Emission Credits to comply with applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use 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) Offsets for Title 30 TAC Chapter 116
 - B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:
 - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)-(d)
 - (ii) The 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 1
 - (iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)-(d)
 - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122
 - (v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)
- 13. Use of Discrete Emission Credits to comply with the applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) If applicable, offsets for Title 30 TAC Chapter 116
 - (iv) Temporarily exceed state NSR permit allowables

- B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:
 - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
 - (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
 - (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC 101.376(d)(1)(A)
 - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122
 - (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Risk Management Plan

14. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

Protection of Stratospheric Ozone

- 15. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone:
 - A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle airconditioning 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 airconditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.
 - B. Any on site servicing, maintenance, and repair of fleet vehicle air conditioning using ozone-depleting refrigerants shall be conducted in accordance with 40 CFR Part 82, Subpart B. Permit holders shall ensure that repairs or refrigerant removal are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart B.
 - C. The permit holder shall comply with 40 CFR Part 82, Subpart H related to Halon Emissions Reduction requirements as specified in 40 CFR § 82.250 - § 82.270 and the applicable Part 82 Appendices.

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 unit CTHRSG8 (identified in the Certificate of Representation as unit CTHRSG), located at the affected source identified by ORIS/Facility code 58378, the designated representative and the owner or operator, as applicable, shall comply with the following Acid Rain Permit requirements.
 - A. General Requirements
 - (i) Under 30 TAC § 122.12(1) and 40 CFR Part 72, the Acid Rain Permit requirements contained here are a separable portion of the Federal Operating Permit (FOP) and have an independent public comment process which may be separate from, or combined with the FOP.
 - (ii) The owner and operator shall comply with the requirements of 40 CFR Part 72 and 40 CFR Part 76. Any noncompliance with the Acid Rain Permit will be considered noncompliance with the FOP and may be subject to enforcement action.
 - (iii) The owners and operators of the affected source shall operate the source and the unit in compliance with the requirements of this Acid Rain Permit and all other applicable State and federal requirements.
 - (iv) The owners and operators of the affected source shall comply with the General Terms and Conditions of the FOP that incorporates this Acid Rain Permit.
 - (v) The term for the Acid Rain permit shall commence with the issuance of the FOP that incorporates the Acid Rain permit and shall be run concurrent with the remainder of the term of the FOP. Renewal of the Acid Rain permit shall coincide with the renewal of the FOP that incorporates the Acid Rain permit and subsequent terms shall be no more than five years from the date of renewal of the FOP and run concurrent with the permit term of the FOP.
 - B. Monitoring Requirements
 - (i) The owners and operators, and the designated representative, of the affected source and each affected unit at the source shall comply with the monitoring requirements contained in 40 CFR Part 75.

- (ii) The emissions measurements recorded and reported in accordance with 40 CFR Part 75 and any other credible evidence shall be used to determine compliance by the affected source with the acid rain emissions limitations and emissions reduction requirements for SO₂ and NO_x under the ARP.
- (iii) The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emission of other pollutants or other emissions characteristics at the unit under other applicable requirements of the FCAA Amendments (42 U.S.C. 7401, as amended November 15, 1990) and other terms and conditions of the operating permit for the source.
- C. SO₂ emissions requirements
 - (i) The owners and operators of each source and each affected unit at the source shall comply with the applicable acid rain emissions limitations for SO₂.
 - (ii) As of the allowance transfer deadline the owners and operators of the affected source and each affected unit at the source shall hold, in the unit's compliance subaccount, allowances in an amount not less than the total annual emissions of SO₂ for the previous calendar year.
 - (iii) Each ton of SO₂ emitted in excess of the acid rain emissions limitations for SO₂ shall constitute a separate violation of the FCAA amendments.
 - (iv) An affected unit shall be subject to the requirements under (i) and (ii) of the SO₂ emissions requirements as follows:
 - (1) Starting January 1, 2000, an affected unit under 40 CFR § 72.6(a)(2); or
 - (2) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR Part 75, an affected unit under 40 CFR § 72.6(a)(3).
 - (v) Allowances shall be held in, deducted from, or transferred into or among Allowance Tracking System accounts in accordance with the requirements of the ARP.
 - (vi) An allowance shall not be deducted, for compliance with the requirements of this permit, in a calendar year before the year for which the allowance was allocated.
 - (vii) An allowance allocated by the EPA Administrator or under the ARP is a limited authorization to emit SO₂ in accordance with the ARP. No provision of the ARP, Acid Rain permit application, this Acid Rain Permit, or an exemption under 40 CFR §§ 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
 - (viii) An allowance allocated by the EPA Administrator under the ARP does not constitute a property right.
- D. NO_x Emission Requirements
 - The owners and operators of the source and each affected unit at the source shall comply with the applicable acid rain emissions limitations for NO_x under 40 CFR Part 76.

- E. Excess emissions requirements for SO₂ and NO_x.
 - The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77.
 - (ii) If an affected source has excess emissions in any calendar year shall, as required by 40 CFR Part 77:
 - (1) Pay, without demand, the penalty required and pay, upon demand, the interest on that penalty.
 - (2) Comply with the terms of an approved offset plan.
- F. Recordkeeping and Reporting Requirements
 - (i) Unless otherwise provided, the owners and operators of the affected source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the permitting authority or the EPA Administrator.
 - (1) The certificate of representation for the designated representative for the source and each affected unit and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR § 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative.
 - (2) All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping (rather than a five-year period cited in 30 TAC § 122.144), the 3-year period shall apply.
 - (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the ARP or relied upon for compliance certification.
 - (4) Copies of all documents used to complete an acid rain permit application and any other submission under the ARP or to demonstrate compliance with the requirements of the ARP.
 - (ii) The designated representative of an affected source and each affected unit at the source shall submit the reports required under the ARP including those under 40 CFR Part 72, Subpart I and 40 CFR Part 75.
- G. Liability
 - (i) Any person who knowingly violates any requirement or prohibition of the ARP, a complete acid rain permit application, an acid rain permit, or a written exemption under 40 CFR §§ 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to FCAA § 113(c).

- (ii) Any person who knowingly makes a false, material statement in any record, submission, or report under the ARP shall be subject to criminal enforcement pursuant to FCAA § 113(c) and 18 U.S.C. 1001.
- (iii) No permit revision shall excuse any violation of the requirements of the ARP that occurs prior to the date that the revision takes effect.
- (iv) The affected source and each affected unit shall meet the requirements of the ARP contained in 40 CFR Parts 72 through 78.
- (v) Any provision of the ARP that applies to an affected source or the designated representative of an affected source shall also apply to the owners and operators of such source and of the affected units at the source.
- (vi) Any provision of the ARP that applies to an affected unit (including a provision applicable to the DR of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR § 72.44 (Phase II repowering extension plans) and 40 CFR § 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR Part 75 (including 40 CFR § 75.16, 75.17, and 75.18), the owners and operators and the DR of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the DR and that is located at a source of which they are not owners or operators or the DR.
- (vii) Each violation of a provision of 40 CFR Parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or DR of such source or unit, shall be a separate violation of the FCAA Amendments.
- H. Effect on other authorities. No provision of the ARP, an acid rain permit application, an acid rain permit, or an exemption under 40 CFR §§ 72.7 or 72.8 shall be construed as:
 - (i) Except as expressly provided in Title IV of the FCAA Amendments, exempting or excluding the owners and operators and, to the extent applicable, the DR of an affected source or affected unit from compliance with any other provision of the FCAA Amendments, including the provisions of Title I of the FCAA Amendments relating to applicable National Ambient Air Quality Standards or State Implementation Plans.
 - (ii) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the FCAA Amendments.
 - (iii) Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding such state regulation, or limiting such state regulation, including any prudence review requirements under such state law.
 - (iv) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
 - (v) Interfering with or impairing any program for competitive bidding for power supply in a state in which such program is established.

I. The number of SO₂ allowances allocated by the EPA in 40 CFR Part 73 is enforceable only by the EPA Administrator.

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

- 19. For unit CTHRSG8 (identified in the Certificate of Representation as unit CTHRSG), located at the site identified by Plant code/ORIS/Facility code 58378, the designated representative and the owner or operator, as applicable, shall comply with the following CSAPR requirements.
 - A. General Requirements
 - (i) The owners and operators of the CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall operate the source and the unit in compliance with the requirements of the CSAPR NO_x Ozone Season Group 2 Trading Program and all other applicable State and federal requirements.
 - (ii) The owners and operators of the CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall comply with the requirements of 40 CFR Part 97, Subpart EEEEE for CSAPR NO_x Ozone Season Group 2 Trading Program, and with the General Terms and Conditions of the Federal Operating Permit (FOP) that incorporates the CSAPR requirements.
 - B. Description of CSAPR Monitoring Provisions
 - (i) The CSAPR subject unit(s), and the unit-specific monitoring provisions at this source, are identified in the following paragraph(s). These unit(s) are subject to the requirements for the CSAPR NO_x Ozone Season Group 2 Trading Program.
 - (1) For unit CTHRSG8, the owners and operators shall comply with the continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR Part 75, Subpart H for NO_x, and with the excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR Part 75, Appendix D for heat input.
 - (ii) The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR §§ 97.830 through 97.835 (CSAPR NO_x Ozone Season Group 2 Trading Program). The monitoring, recordkeeping and reporting requirements applicable to each unit are included below in the standard conditions for the applicable CSAPR trading program.
 - (iii) Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR §§ 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA's website at https://www.epa.gov/airmarkets/clean-air-markets-monitoring-plans-part-75sources.
 - (iv) Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR Part 75, Subpart E and 40 CFR § 75.66 and § 97.835 (CSAPR NO_x Ozone Season Group 2 Trading Program). The Administrator's response approving or disapproving any petition for an alternative

monitoring system is available on the EPA's website at https://www.epa.gov/airmarkets/part-75-petition-responses.

- (v) Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR §§ 97.830 through 97.834 (CSAPR NO_x Ozone Season Group 2 Trading Program) must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR § 75.66 and § 97.835 (CSAPR NO_x Ozone Season Group 2 Trading Program). The Administrator's response approving or disapproving any petition for an alternative to a monitoring, recordkeeping, or reporting requirement is available on the EPA's website at https://www.epa.gov/airmarkets/part-75petition-responses.
- (vi) The descriptions of monitoring applicable to the unit(s) included above meet the requirement of 40 CFR §§ 97.830 through 97.834 (CSAPR NO_x Ozone Season Group 2 Trading Program), and therefore procedures for minor permit revisions, in accordance with 30 TAC § 122.217, may be used to add or change this unit's monitoring system description.
- 20. CSAPR NO_x Ozone Season Group 2 Trading Program Requirements (40 CFR § 97.806)
 - A. Designated representative requirements
 - (i) The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR §§ 97.813 through 97.818.
 - B. Emissions monitoring, reporting, and recordkeeping requirements
 - (i) The owners and operators, and the designated representative, of each CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR § 97.830 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), § 97.831 (initial monitoring system certification and recertification procedures), § 97.832 (monitoring system out-of-control periods), § 97.833 (notifications concerning monitoring), § 97.834 (recordkeeping and reporting, including monitoring plans, certifications, quarterly reports, and compliance certification), and § 97.835 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
 - (ii) The emissions data determined in accordance with 40 CFR § 97.830 through § 97.835 and any other credible evidence shall be used to calculate allocations of CSAPR NO_x Ozone Season Group 2 allowances under 40 CFR §§ 97.811(a)(2) and (b) and § 97.812 and to determine compliance with the CSAPR NO_x Ozone Season Group 2 emissions limitation and assurance provisions under paragraph C. below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR §§ 97.830 through 97.835 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.
 - C. NO_x emissions requirements

- (i) CSAPR NO_x Ozone Season Group 2 emissions limitation
 - (1) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall hold, in the source's compliance account, CSAPR NO_x Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR § 97.824(a) in an amount not less than the tons of total NO_x emissions for such control period from all CSAPR NO_x Ozone Season Group 2 units at the source.
 - (2) If total NO_x emissions during a control period in a given year from the CSAPR NO_x Ozone Season Group 2 units at a CSAPR NO_x Ozone Season Group 2 source are in excess of the CSAPR NO_x Ozone Season Group 2 emissions limitation set forth in paragraph C.(i)(1) above, then:
 - (a) The owners and operators of the source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall hold the CSAPR NO_x Ozone Season Group 2 allowances required for deduction under 40 CFR § 97.824(d); and
 - (b) The owners and operators of the source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart EEEEE and the Clean Air Act.
- (ii) CSAPR NO_x Ozone Season Group 2 assurance provisions
 - If total NO_x emissions during a control period in a given year from all (1) CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO_x emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NOx Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR § 97.825(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR § 97.825(b), of multiplying -
 - (a) The quotient of the amount by which the common designated representative's share of such NO_x emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO_x emissions exceeds the respective common designated representative's assurance level; and

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

- (iv) Vintage of allowances held for compliance
 - (1) A CSAPR NO_x Ozone Season Group 2 allowance held for compliance with the requirements under paragraph C.(i)(1) above for a control period in a given year must be a CSAPR NO_x Ozone Season Group 2 allowance that was allocated for such control period or a control period in a prior year.
 - (2) A CSAPR NO_x Ozone Season Group 2 allowance held for compliance with the requirements under paragraphs C.(i)(2)(a) and (ii)(1) through (3) above for a control period in a given year must be a CSAPR NO_x Ozone Season Group 2 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- (v) Allowance Management System requirements. Each CSAPR NO_x Ozone Season Group 2 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart EEEEE.
- (vi) Limited authorization. A CSAPR NO_x Ozone Season Group 2 allowance is a limited authorization to emit one ton of NO_x during the control period in one year. Such authorization is limited in its use and duration as follows:
 - (1) Such authorization shall only be used in accordance with the CSAPR NO_x Ozone Season Group 2 Trading Program; and
 - (2) Notwithstanding any other provision of 40 CFR Part 97, Subpart EEEEE, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
- (vii) Property right. A CSAPR NO_x Ozone Season Group 2 allowance does not constitute a property right.
- D. FOP revision requirements
 - No FOP revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_x Ozone Season Group 2 allowances in accordance with 40 CFR Part 97, Subpart EEEEE.
 - (ii) This FOP incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR §§ 97.830 through 97.835, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR Part 75, subpart H), an excepted monitoring system (pursuant to 40 CFR Part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR § 75.19), and an alternative monitoring system (pursuant to 40 CFR Part 75, subpart E). Therefore the Description of CSAPR Monitoring Provisions for CSAPR subject unit(s) may be added to, or changed, in this FOP using procedures for minor permit revisions in accordance with 30 TAC § 122.217.
- E. Additional recordkeeping and reporting requirements

- (i) Unless otherwise provided, the owners and operators of each CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
 - (1) The certificate of representation under 40 CFR § 97.816 for the designated representative for the source and each CSAPR NO_x Ozone Season Group 2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR § 97.816 changing the designated representative.
 - (2) All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart EEEEE.
 - (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO_x Ozone Season Group 2 Trading Program.
- (ii) The designated representative of a CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall make all submissions required under the CSAPR NO_x Ozone Season Group 2 Trading Program, except as provided in 40 CFR § 97.818. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under 30 TAC § 122.165.
- F. Liability
 - (i) Any provision of the CSAPR NO_x Ozone Season Group 2 Trading Program that applies to a CSAPR NO_x Ozone Season Group 2 source or the designated representative of a CSAPR NO_x Ozone Season Group 2 source shall also apply to the owners and operators of such source and of the CSAPR NO_x Ozone Season Group 2 units at the source.
 - (ii) Any provision of the CSAPR NO_x Ozone Season Group 2 Trading Program that applies to a CSAPR NO_x Ozone Season Group 2 unit or the designated representative of a CSAPR NO_x Ozone Season Group 2 unit shall also apply to the owners and operators of such unit.
- G. Effect on other authorities
 - (i) No provision of the CSAPR NO_x Ozone Season Group 2 Trading Program or exemption under 40 CFR § 97.805 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_x Ozone Season Group 2 source or CSAPR NO_x Ozone Season Group 2 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Unit Summary	 	

Applicable Requirements Summary25

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

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
COOLTWR8	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111-3	30 TAC Chapter 111, Visible Emissions	No changing attributes.
CTHRSG8	STATIONARY TURBINES	N/A	R71200-3	30 TAC Chapter 117, Utility Electric Generation	CO Emission Limitation = Title 30 TAC § 117.1210(b)(1)., NH3 Emission Limitation = Title 30 TAC § 117.1210(b)(2).
CTHRSG8	STATIONARY TURBINES	N/A	R71200-7	30 TAC Chapter 117, Utility Electric Generation	CO Emission Limitation = Turbine is complying with an Alternative Case Specific Specification under 30 TAC §§ 117.1025, 117.1225 or 117.1325., NH3 Emission Limitation = Turbine is complying with an Alternative Case Specific Specification under 30 TAC §§ 117.1025, 117.1225 or 117.1325.
CTHRSG8	STATIONARY TURBINES	N/A	60KKKK-1	40 CFR Part 60, Subpart KKKK	No changing attributes.
CTHRSG8	STATIONARY TURBINES	N/A	63YYYY-1	40 CFR Part 63, Subpart YYYY	No changing attributes.
CTHRSG8STK	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1151	30 TAC Chapter 111, Nonagricultural Processes	No changing attributes.
CTHRSG8STK	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
EMGEN8	SRIC ENGINES	N/A	60IIII-1	40 CFR Part 60, Subpart IIII	No changing attributes.
EMGEN8	SRIC ENGINES	N/A	63ZZZ-1	40 CFR Part 63, Subpart ZZZZ	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
GRP-ULOAD	LOADING/UNLOADING OPERATIONS	AT-ULOAD, CA- ULOAD, CI-ULOAD, KS-ULOAD, PO- ULOAD	R1115-3	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
GRP-VEREQ	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	CT-LV, CTEVAC- PV, CTK-LOV	R1111-2	30 TAC Chapter 111, Visible Emissions	No changing attributes.
S-PN	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	N/A	R115-2	30 TAC Chapter 115, Water Separation	No changing attributes.
SCRUB	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1115-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.

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)
COOLTWR8	EP	R1111-3	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
CTHRSG8	EU	R71200-3	со	30 TAC Chapter 117, Utility Electric Generation	§ 117.1210(b)(1) § 117.1210(b) § 117.1210(b)(1)(B)	No person shall allow the discharge into the atmosphere from any unit subject to the NO _x emission specifications specified in subsection (a) of this section, carbon monoxide (CO) emissions in excess of 400 parts per million by volume (ppmv) at 3.0% oxygen (O2), dry, or alternatively, 0.30 lb/MMBtu heat input for gas-fired stationary gas turbines.	§ 117.1235(a) § 117.1235(a)(1) § 117.1235(a)(3) § 117.1235(c) § 117.1235(d) § 117.1235(d) § 117.1235(d)(5) § 117.1240(b) § 117.1240(d) [G]§ 117.1240(d)(2) § 117.8110(a) § 117.8110(a)(1) [G]§ 117.8110(a)(1) [G]§ 117.8120(1) § 117.8120(1) § 117.8120(1)(A)	§ 117.1245(a) [G]§ 117.1245(e)	§ 117.1235(b) § 117.1245(b) § 117.1245(b)(1) § 117.1245(b)(2) [G]§ 117.1245(c) § 117.1245(d) § 117.1245(d)(2) § 117.1245(d)(3) § 117.1245(d)(4) § 117.1245(d)(5) § 117.1245(d)(5) § 117.8010(1) § 117.8010(2) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(7) [G]§ 117.8010(8)
CTHRSG8	EU	R71200-3	NH3	30 TAC Chapter 117, Utility Electric Generation	§ 117.1210(b)(2) § 117.1210(b) § 117.1210(b)(2)(A)	No person shall allow the discharge into the atmosphere from any unit subject to the NO _x emission specifications specified in subsection (a) of this section, ammonia emissions in excess of 10 ppmv, at	§ 117.1235(a) § 117.1235(a)(2) § 117.1235(a)(3) § 117.1240(c) § 117.1240(i) § 117.8130 § 117.8130(2)	§ 117.1245(a) [G]§ 117.1245(e)	§ 117.1235(b) § 117.1245(b) § 117.1245(b)(1) § 117.1256 § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A)

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)
						15% O2, dry, for stationary gas turbines (including duct burners used in turbine exhaust ducts) that inject urea or ammonia into the exhaust stream for NO_x control.			§ 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)
CTHRSG8	EU	R71200-3	NOx	30 TAC Chapter 117, Utility Electric Generation	§ 117.1210(a)(3) [G]§ 117.1203(c) § 117.1220(a) § 117.1220(a) § 117.1220(b) [G]§ 117.1220(c) § 117.1220(c) § 117.1220(c) § 117.1220(i) § 117.1220(i) § 117.1220(i) § 117.1220(l) § 117.1240(l) § 117.1240(l	Emission specifications for the Mass Emission Cap and Trade Program. The owner or operator of each stationary gas turbine (including duct burners used in turbine exhaust ducts), shall ensure that emissions of nitrogen oxides (NO _x) do not exceed 0.032, in lb/MMBtu heat input, on the basis of daily and 30-day averaging periods as specified in §117.1220 of this title, and as specified in the mass emissions cap and trade program of Chapter 101, Subchapter H, Division 3 of this title.	§ 117.1220(d) [G]§ 117.1220(e)(1) § 117.1220(h) § 117.1220(k) § 117.1235(a) § 117.1235(a)(3) § 117.1235(d)(3) § 117.1235(d)(1) § 117.1235(d)(2) § 117.1235(d)(2) § 117.1235(d)(3) § 117.1240(a) § 117.1240(d) [G]§ 117.1240(d) [G]§ 117.1240(n) § 117.1240(n) § 117.1240(n) § 117.1240(n) § 117.1240(n) § 117.1240(a)(1) § 117.8110(a)(2) § 117.8110(a)(2)	§ 117.1220(f) § 117.1245(a) [G]§ 117.1245(e)	[G]§ 117.1203(c) § 117.1220(g) § 117.1235(b) § 117.1245(b) § 117.1245(b)(1) § 117.1245(b)(2) [G]§ 117.1245(d)(2) [G]§ 117.1245(d)(2) § 117.1245(d)(3) § 117.1245(d)(3) § 117.1245(d)(4) § 117.1245(d)(5) [G]§ 117.1254(b) § 117.1254(c) § 117.1254(c) § 117.1254(c) § 117.1254(c) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(C) § 117.8010(2)(C) § 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(7)
CTHRSG8	EU	R71200-7	со	30 TAC Chapter 117, Utility Electric Generation	[G]§ 117.1225(a) § 117.1225(b)	Where a person can demonstrate that an affected unit cannot attain	** See Periodic Monitoring Summary	None	None

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)
						the applicable requirements of the carbon monoxide (CO) specifications of §117.1210(b) of this title (relating to Emission Specifications for Attainment Demonstration), the executive director may approve emission specifications different from the CO specifications in §117.1210(b) of this title for that unit per: §117.1225(a)(1)-(3).			
CTHRSG8	EU	R71200-7	NH3	30 TAC Chapter 117, Utility Electric Generation	[G]§ 117.1225(a) § 117.1225(b)	Where a person can demonstrate that an affected unit cannot attain the applicable requirements of the ammonia specifications of §117.1210(b) of this title (relating to Emission Specifications for Attainment Demonstration), the executive director may approve emission specifications different from the ammonia specifications in §117.1210(b) of this title for that unit per: §117.1225(a)(1)-(3).	** See Periodic Monitoring Summary	None	None
CTHRSG8	EU	R71200-7	NO _x	30 TAC Chapter 117, Utility Electric Generation	§ 117.1210(a)(3) [G]§ 117.1203(c) § 117.1210(c)(3) § 117.1220(a) § 117.1220(b) [G]§ 117.1220(b) [G]§ 117.1220(c) § 117.1220(d)	Emission specifications for the Mass Emission Cap and Trade Program. The owner or operator of each stationary gas turbine (including duct burners used in turbine exhaust ducts),	§ 117.1220(d) [G]§ 117.1220(e)(1) § 117.1220(h) § 117.1220(k) § 117.1235(a) § 117.1235(a)(1) § 117.1235(a)(3)	§ 117.1220(f) § 117.1245(a) [G]§ 117.1245(e)	[G]§ 117.1203(c) § 117.1220(g) § 117.1235(b) § 117.1245(b) § 117.1245(b)(1) § 117.1245(b)(2) [G]§ 117.1245(c)

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)
					§ 117.1220(e) § 117.1220(i) § 117.1220(j) § 117.1220(k) § 117.1220(l) § 117.1220(l) § 117.1240(l) § 117.1240(l)(2) § 117.1240(o) § 117.1240(o)(3)	shall ensure that emissions of nitrogen oxides (NO _x) do not exceed 0.032, in Ib/MMBtu heat input, on the basis of daily and 30-day averaging periods as specified in §117.1220 of this title, and as specified in the mass emissions cap and trade program of Chapter 101, Subchapter H, Division 3 of this title.	§ 117.1235(c) § 117.1235(d) § 117.1235(d)(2) § 117.1235(d)(2) § 117.1235(d)(3) § 117.1240(a) § 117.1240(d) [G]§ 117.1240(d)(2) § 117.1240(i) § 117.1240(n) § 117.1240(n) § 117.1240(o)(1) § 117.8110(a) § 117.8110(a)(2)		§ 117.1245(d) § 117.1245(d)(2) § 117.1245(d)(3) § 117.1245(d)(4) § 117.1245(d)(5) [G]§ 117.1254(b) § 117.1254(c) § 117.1256 § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(C) § 117.8010(2)(C) § 117.8010(2)(C) § 117.8010(2)(C) § 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(7) [G]§ 117.8010(8)
CTHRSG8	EU	60KKK-1	NO _x	40 CFR Part 60, Subpart KKKK	§ 60.4320(a)-Table 1 § 60.4320(a) § 60.4320(b) § 60.4325 § 60.4333(a) § 60.4335(b)(1) [G]§ 60.4345	New, modified, or reconstructed turbine firing natural gas with a heat input at peak load > 850 MMBtu/h must meet the nitrogen oxides emission standard of 15 ppm at 15 percent O ₂ .	$ \begin{cases} 60.4335(b)(1) \\ [G] \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	[G]§ 60.4345 § 60.4350(b)	[G]§ 60.4345 § 60.4350(d) § 60.4375(a) § 60.4380 [G]§ 60.4380(b) § 60.4395
CTHRSG8	EU	60KKKK-1	SO ₂	40 CFR Part 60,	§ 60.4330(a)(2)	You must not burn in the	§ 60.4365	§ 60.4365(a)	§ 60.4375(a)

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)
				Subpart KKKK	§ 60.4333(a)	subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO2/J (0.060 lb SO2/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.	§ 60.4365(a) § 60.4415(a) § 60.4415(a)(2) § 60.4415(a)(2)(ii)		
CTHRSG8	EU	63YYYY-1	Formaldehy de	40 CFR Part 63, Subpart YYYY	§ 63.6100-Table 1.1 § 63.6100 § 63.6100-Table 2.1 § 63.6105(a) § 63.6105(c) § 63.6130(a) § 63.6130(a)-Table 4 § 63.6140(a) § 63.6165	For each new or reconstructed stationary combustion turbine described in §63.6100, which is a lean premix gas- fired stationary combustion turbine as defined in this subpart, must limit the concentration of formaldehyde to 91 ppbvd or less at 15% O2.	§ 63.6110(a) [G]§ 63.6110(b) § 63.6115 § 63.6120(c) § 63.6125(a) § 63.6125(e) § 63.6135(a) § 63.6140(a)-Table 5.1 § 63.6140(a)-Table 5.2 § 63.6145(e) § 63.6145(f)	§ 63.6125(e) § 63.6135(b) § 63.6155(a) § 63.6155(a)(1) § 63.6155(a)(2) § 63.6155(a)(5) § 63.6155(a)(6) [G]§ 63.6155(c) § 63.6155(d) § 63.6155(d) § 63.6160(b) § 63.6160(c)	$ \begin{cases} 63.6130(b) \\ \$ 63.6140(b) \\ \$ 63.6145(a) \\ \$ 63.6145(b) \\ \$ 63.6145(c) \\ \$ 63.6145(c) \\ \$ 63.6145(c) \\ \$ 63.6150(a) \\ \$ 63.6150(a)(2) \\ \$ 63.6150(a)(2) \\ \$ 63.6150(a)(3) \\ [G] \$ 63.6150(a)(5) \\ \$ 63.6150(a)-Table 6.1 \\ \$ 63.6150(a)-Table 6.3.1 \\ \$ 63.6150(a)-Table 6.3.2 \\ \$ 63.6150(a)-Table 6.3.3 \\ [G] \$ 63.6150(a) \\ -Table 6.3.2 \\ \$ 63.6150(a) \\ -Table 6.3.3 \\ [G] \$ 63.6150(b) \\ [G] \$ 63.6150(c) \\ [G] \$$
CTHRSG8S TK	EP	R1151	PM	30 TAC Chapter 111, Nonagricultural Processes	§ 111.151(a) § 111.151(c)	No person may cause, suffer, allow, or permit emissions of particulate matter from any source to exceed the allowable rates specified in Table 1 as	** See Periodic Monitoring Summary	None	None

Unit Group Process	Unit Group Process	SOP Index No.	Pollutant	State Rule or Federal Regulation	Emission Limitation, Standard or	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements	Reporting Requirements
ID No.	Туре			Name	Equipment Specification Citation			(30 TAC § 122.144)	(30 TAC § 122.145)
						follows, except as provided by §111.153 of this title (relating to Emissions Limits for Steam Generators).			
CTHRSG8S TK	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
EMGEN8	EU	601111-1	со	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.	None	None	[G]§ 60.4214(d)
EMGEN8	EU	601111-1	NMHC and NO _X	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	None	None	[G]§ 60.4214(d)

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)
						an NMHC+NOx emission limit of 4.0 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.			
EMGEN8	EU	601111-1	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) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	None	None	[G]§ 60.4214(d)
EMGEN8	EU	60 -1	PM (Opacity)	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039.105(b)(1) § 1039.105(b)(2) § 1039.105(b)(3) § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Emergency stationary Cl ICE, that are not fire pump engines, with displacement < 10 lpc and not constant- speed engines, with max engine power < 2237 KW and a 2007 model year and later or max engine power > 2237 KW and a 2011 model year and later, must comply with following opacity emission limits: 20% during lugging, 50% during peaks in either acceleration or lugging modes as stated in §60.4202(a)(1)-(2), (b)(2), and 40 CFR	None	None	[G]§ 60.4214(d)

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						1039.105(b)(1)-(3).			
EMGEN8	EU	63ZZZ-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- ULOAD	EU	R1115-3	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(1) § 115.212(a)(2) § 115.214(a)(1)(B) § 115.214(a)(1)(D) § 115.214(a)(1)(D)(i)	Vapor pressure (at land- based operations). All land- based loading and unloading of VOC with a true vapor pressure less than 0.5 psia is exempt from the requirements of this division, except as specified.	§ 115.214(a)(1)(A) § 115.214(a)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None
GRP- VEREQ	EP	R1111-2	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(B) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 20% averaged over a six minute period for any source on which construction was begun after January 31, 1972.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
S-PN	EU	R115-2	VOC	30 TAC Chapter 115, Water	§ 115.137(a)(2) [G]§ 115.132(a)(4)	Any single or multiple compartment VOC water	[G]§ 115.135(a) § 115.136(a)(1)	§ 115.136(a)(1) § 115.136(a)(3)	None

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				Separation		separator which separates materials having a true vapor pressure of VOC < .5 psia obtained from any equipment is exempt from §115.132(a).	§ 115.136(a)(3) § 115.136(a)(4)	§ 115.136(a)(4)	
SCRUB	EP	R1115-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(B) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream specified in §115.121(a)(1) of this title with a concentration of VOC less than 612 parts per million by volume (ppmv) is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2) § 115.126(4)	None

Additional Monitoring Requirements

Periodic Monitoring Summary	/	
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Unit/Group/Process Information		
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ID No.: COOLTWR8		
Control Device ID No.: N/A Control Device Type: N/A		
Applicable Regulatory Requirement		
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-3	
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)	
Monitoring Information		
Indicator: Visible Emissions		
Minimum Frequency: once per quarter		
Averaging Period: N/A		
Deviation Limit: 15% averaged over a six-minute period.		
Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume		

condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.

If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.

Unit/Group/Process Information		
ID No.: CTHRSG8		
Control Device ID No.: N/A	Control Device Type: N/A	
Applicable Regulatory Requirement		
Name: 30 TAC Chapter 117, Utility Electric Generation	SOP Index No.: R71200-7	
Pollutant: CO	Main Standard: [G]§ 117.1225(a)	
Monitoring Information		
Indicator: CO emissions in lb/hr.		
Minimum Frequency: four times per hour		
Averaging Period: one hour		
Deviation Limit: CO emissions that exceed 450 lb/hr based on CEMS data during MSS shall be considered and reported as a deviation.		
Periodic Monitoring Text: Measure and record the concentration of carbon monoxide in the exhaust stream of the control device with a continuous emission monitoring system (CEMS). The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the Performance Specifications of 40 CFR Part 60, Appendix B. Establish a maximum carbon monoxide concentration the most recent performance test data, manufacturer's recommendations, engineering calculations, and/or historical data. Any monitoring data above the maximum limit shall be considered and reported as a deviation.		

Unit/Group/Process Information		
ID No.: CTHRSG8		
Control Device ID No.: N/A	Control Device Type: N/A	
Applicable Regulatory Requirement		
Name: 30 TAC Chapter 117, Utility Electric Generation	SOP Index No.: R71200-7	
Pollutant: NH₃	Main Standard: [G]§ 117.1225(a)	
Monitoring Information		
Indicator: Planned startup and shutdown durations		
Minimum Frequency: monthly		
Averaging Period: N/A		
Deviation Limit: Start-up and shut-down periods that exceed 4 hours and 1 hour, respectively, shall be considered and reported as a deviation.		
Periodic Monitoring Text: Measure and record the durations for planned unit startup and shutdowns. Durations are limited to the total number of hours as defined in NSR Permit 98664. Any duration which exceeds the limit defined within the aforementioned permits shall be considered and reported as a deviation. Failure to utilize good combustion practices during planned MSS shall be considered and reported as a deviation.		

Unit/Group/Process Information		
ID No.: CTHRSG8STK		
Control Device ID No.: N/A	Control Device Type: N/A	
Applicable Regulatory Requirement		
Name: 30 TAC Chapter 111, Nonagricultural Processes	SOP Index No.: R1151	
Pollutant: PM	Main Standard: § 111.151(a)	
Monitoring Information		
Indicator: Fuel Type		
Minimum Frequency: Annually or at any time an alternate fu	Jel is used	
Averaging Period: N/A		
Deviation Limit: An alternative fuel being fired for a period greater than or equal to 24 consecutive hours if a visible observation is not done.		
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, for a period greater than or equal to 24 consecutive hours it shall be considered and reported as a deviation or the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are observed. Any time an alternate fuel is fired for a period of greater than 7 consecutive days then visible emissions observations will be conducted no less than once per week. Documentation of all observations shall be maintained. If visible emissions are present during the firing of an alternate fuel, the permit holder shall either list this occurrence as a deviation or the permit holder may determine the opacity consistent with Test Method 9. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.		

Unit/Group/Process Information		
ID No.: CTHRSG8STK		
Control Device ID No.: N/A	Control Device Type: N/A	
Applicable Regulatory Requirement		
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-1	
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)	
Monitoring Information		
Indicator: Fuel Type		
Minimum Frequency: Annually or at any time an alternate fuel is used		
Averaging Period: N/A		
Deviation Limit: Maximum Opacity = 15% averaged over a six-minute period		
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, for a period greater than or equal to 24 consecutive hours it shall be considered and reported as a deviation or the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are observed. Any time an alternate fuel is fired for a period of greater than 7 consecutive days then visible emissions observations will be conducted no less than once per week. Documentation of all observations shall be maintained. If visible emissions are present during the firing of an alternate fuel, the permit holder shall either list this occurrence as a deviation or the permit holder may determine the opacity consistent with Test Method 9. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be		

reported as a deviation.

Unit/Group/Process Information		
ID No.: GRP-VEREQ		
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)(B)		
Monitoring Information		
Indicator: Visible Emission		
Minimum Frequency: Annually		
Averaging Period: N/A		
Deviation Limit: Maximum Opacity = 20% averaged over a six-minute period		
Periodic Monitoring Text: Visible emissions observations shall be made and recorded. The source must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observation cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. Documentation of all observations shall be maintained. If visible emissions are observed, the permit holder shall either list this occurrence as a deviation or determine the opacity consistent with Test Method 9. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.		
If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If a Test Method 9 is performed, the opacity limit is the		

than 24 hours after observing visible emissions. If a Test Method 9 is performed, the opacity limit is the corresponding opacity limit associated with the particulate matter standard in the underlying applicable requirement. If there is no corresponding opacity limit in the underlying applicable requirement, the maximum opacity will be established using the most recent performance test. If the result of the Test Method 9 is opacity above the corresponding opacity limit (associated with the particulate matter standard in the underlying applicable requirement or as identified as a result of a previous performance test to establish the maximum opacity limit), the permit holder shall report 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
CTHRSG8	N/A	40 CFR Part 60, Subpart TTTT	Unit commenced construction prior to January 8, 2014 and has not commenced modification or reconstruction since June 18, 2014.
GRP-VEREQ	CT-LV, CTEVAC-PV, CTK-LOV	30 TAC Chapter 115, Vent Gas Controls	Does not emit VOC.
MEAFUG	N/A	40 CFR Part 61, Subpart J	Fugitive piping components do not operate in benzene service as defined in 40 CFR 61.111.
MEAFUG	N/A	40 CFR Part 61, Subpart V	Fugitive piping components do not operate in volatile hazardous air pollutant (VHAP) service as defined in CFR 61.241.
MEAFUG	N/A	40 CFR Part 63, Subpart H	Fugitive piping components are not located within a source subject to the provisions of a specific subpart in 40 CFR Part 63 that references 40 CFR Part 63, Subpart H.
NGFUG	N/A	40 CFR Part 61, Subpart J	Fugitive piping components do not operate in benzene service as defined in 40 CFR 61.111.
NGFUG	N/A	40 CFR Part 61, Subpart V	Fugitive piping components do not operate in volatile hazardous air pollutant (VHAP) service as defined in 40 CFR 61.241.
NGFUG	N/A	40 CFR Part 63, Subpart H	Fugitive piping components are not located within a source subject to the provisions of a specific subpart in 40 CFR Part 63 that references 40 CFR Part 63, Subpart H.
NH3FUG	N/A	40 CFR Part 61, Subpart J	Fugitive piping components do not operate in benzene service as defined in 40 CFR 61.111.
NH3FUG	N/A	40 CFR Part 61, Subpart V	Fugitive piping components do not operate in volatile hazardous air pollutant (VHAP) service as defined in CFR 61.241.

Permit Shield

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
NH3FUG	N/A	40 CFR Part 63, Subpart H	Fugitive piping components are not located within a source subject to the provisions of a specific subpart in 40 CFR Part 63 that references 40 CFR Part 63, Subpart H.
S-PN	N/A	40 CFR Part 60, Subpart QQQ	Not located in a petroleum refinery.
S-PN	N/A	40 CFR Part 61, Subpart FF	Does not contain or store benzene waste.
S-PN	N/A	40 CFR Part 61, Subpart L	Not a furnace and foundry coke by-product recovery plant.
S-PN	N/A	40 CFR Part 63, Subpart CC	Not a petroleum refining process unit.
S-PN	N/A	40 CFR Part 63, Subpart DD	Not an off-site material process unit.
S-PN	N/A	40 CFR Part 63, Subpart G	Not within a source subject to 63 Subpart F.
S-PN	N/A	40 CFR Part 63, Subpart VV	No applicable subparts within 60, 61, or 63 reference this subpart.

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.

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.

Prevention of Significant Deterioration (PSD) Permits			
PSD Permit No.: PSDTX1268	Issuance Date: 02/16/2023		
Nonattainment (NA) Permits			
NA Permit No.: N138	Issuance Date: 02/16/2023		
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.			
Authorization No.: 98664	Issuance Date: 02/16/2023		
Permits By Rule (30 TAC Chapter 106) for the Application Area			
Number: 106.122	Version No./Date: 09/04/2000		
Number: 106.227	Version No./Date: 09/04/2000		
Number: 106.263	Version No./Date: 11/01/2001		
Number: 106.265	Version No./Date: 09/04/2000		
Number: 106.372	Version No./Date: 09/04/2000		
Number: 106.454	Version No./Date: 11/01/2001		
Number: 106.472	Version No./Date: 09/04/2000		
Number: 106.473	Version No./Date: 09/04/2000		
Number: 106.511	Version No./Date: 09/04/2000		
Number: 106.512	Version No./Date: 06/13/2001		
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**	
AT-ULOAD	ANTI-SCALENT UNLOADING	106.472/09/04/2000	
CA-ULOAD	CITRIC ACID UNLOADING	106.472/09/04/2000	
CI-ULOAD	CORROSION INHIBITOR UNLOADING	106.472/09/04/2000	
COOLTWR8	COOLING TOWER	98664, PSDTX1268, N138	
CT-LV	LUBE MIST SEPERATOR VENT	98664, PSDTX1268, N138	
CTEVAC-PV	CT GEN BEARING SEALING EVAC PUMP VENT	98664, PSDTX1268, N138	
CTHRSG8	GAS TURBINE/HRSG	98664, PSDTX1268, N138	
CTHRSG8STK	GAS TURBINE/HRSG STACK	98664, PSDTX1268, N138	
CTK-LOV	CO2 COMPRESSOR LUBE OIL RESERVOIR TANK ELIMINATOR	98664, PSDTX1268, N138	
EMGEN8	EMERGENCY ENGINE	98664, PSDTX1268, N138	
KS-ULOAD	KS-1 UNLOADING	106.473/09/04/2000	
MEAFUG	MEA FUGITIVES	98664, PSDTX1268, N138	
NGFUG	NATURAL GAS FUGITIVES	98664, PSDTX1268, N138	
NH3FUG	AMMONIA FUGITIVES	98664, PSDTX1268, N138	
PO-ULOAD	POLYMER UNLOADING	106.472/09/04/2000	
S-PN	OIL-WATER SEPARATOR	106.532/09/04/2000	
SCRUB	CO2 SCRUBBER	98664, PSDTX1268, N138	

**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

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	
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
НАР	hazardous air pollutant
H/G/B	Houston/Galveston/Brazoria (nonattainment area)
H ₂ S	hydrogen sulfide
ID No.	identification number
lb/hr	
MACT	
MMBtu/hr	
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NESHAP	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO _x	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PEMS	predictive emissions monitoring system
PM	
ppmv	
PRO	process unit
PSD	prevention of significant deterioration
psia	
SIP	
SO ₂	sulfur dioxide
TCEQ	
TSP	total suspended particulate
TVP	true vapor pressure
U.S.C.	United States Code
	volatile organic compound
VOC	

Appendix B

Permit Numbers: 98664 and PSDTX1268 and N138				Issuance Date: February 16, 2023			
Emission Point No. (1)	Source Name (2)	Air	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
		Contaminant Name (3)	lbs/hour (5)	TPY (4)	Special Conditions/ Application Information	Special Conditions/ Application Information	Special Conditions/ Application Information
		NOx	9.36	37.63	-	3, 4, 6, 9, 10, 16, 17, 20, 21, 22, 23, 26, 27	3, 4, 20, 21, 22, 28
		NOx (MSS)	52.00				
		со	25.66	102			
		CO (MSS)	450				
	O such soft and Truck in a	VOC	3.26	12.88			
	Combustion Turbine and HRSG + Duct Burner (GE 7EA, ~80 MW) (5)	VOC (MSS)	15.50		3, 4, 6, 9, 10, 20, 21, 22, 23		
CTIKSGO		PM	16.58	71.70			
		PM10	16.58	71.70			
		PM2.5	16.58	71.70			
		SO2	1.75	6.92			
		H2SO4	0.62	2.44			
		NH3	8.67	34.20			
	Cooling Tower	PM	1.10	4.82	24		
COOLTWR8		PM10	0.39	1.69		24, 27	
		PM2.5	<0.01	0.01			
	Enhanced Scrubber	VOC	24.53	37.05	20, 22	20, 22, 26, 27	20.22
SCRUB		NH3	1.35	5.70			20, 22
EMGEN8	Emergency Generator (217 horsepower)	NOx	1.42	0.01	3, 9	3, 8, 9 27	3
		СО	1.25	0.01			
		VOC	1.42	0.01			
		PM	0.07	<0.01			

Major NSR Summary Table

Permit Numbers: 98664 and PSDTX1268 and N138				Issuance Date: February 16, 2023			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour (5)	TPY (4)	Special Conditions/ Application Information	Special Conditions/ Application Information	Special Conditions/ Application Information
		PM10	0.07	<0.01			
		PM2.5	0.07	<0.01			
		SO2	0.44	<0.01			
MEAFUG	MEA Fugitives (6)	VOC	0.32	1.40	14	14, 27	14
NGFUG	Natural Gas Fugitives	VOC	0.11	0.49		27	
NH3FUG	Ammonia Fugitives (6)	NH3	0.02	0.08	13	27	

Major NSR Summary Table

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

(2) Specific point source name. For fugitive sources, use area name or fugitive source name.

(3)	VOC	volatile organic compounds as defined in Title 30 Texas Administrative Code§
	101.1 NOx	total oxides of nitrogen
	SO2	sulfur dioxide
	PM	total particulate matter, suspended in the atmosphere, including PM10and PM2s, as represented
	PM10	total particulate matter equal to or less than 10 microns in diameter, including PM2s, as represented
	PM2.5	particulate matter equal to or less than 2.5 microns in diameter
	CO	carbon monoxide
	H2SO4	sulfuric acid
	NH3	ammonia
(4)	Compliance wit	h annual emission limits (tons per year) is based on a 12-month rolling period.
(5)	The planned ma	aintenance, startup, and shutdown (MSS) pounds per hour (lbs/hr) emission limits apply only during each

(5) The planned maintenance, startup, and shutdown (MSS) pounds per hour (lbs/hr) emission limits apply only during each clock hour that includes one or more minutes of MSS activities. During all other clock hours, the normal operations lbs/hr emission limits apply. The TPY emission limit for this facility includes emissions from the facility during both normal operations and planned MSS activities.

(6) 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 Petra Nova Parish Holdings LLC Authorizing the Continued Operation of Carbon Capture Plant Located at Richmond, Fort Bend County, Texas Latitude 29.475277 Longitude -95.634166

Permit: 98664

Issuance Date:	February 16, 2023	
Expiration Date:	February 16, 2033	

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- 1. Facilities covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)]¹
- 2. Voiding of Permit. A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the 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;

For the Commission

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

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

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

°C = Temperature in degrees Celsius °F = Temperature in degrees Fahrenheit °K = Temperature in degrees Kelvin $\mu g = microgram$ $\mu g/m^3 = microgram per cubic meter$ acfm = actual cubic feet per minute AMOC = alternate means of control AOS = alternative operating scenario AP-42 = Air Pollutant Emission Factors, 5th edition APD = Air Permits Division API = American Petroleum Institute APWL = air pollutant watch list BPA = Beaumont/ Port Arthur BACT = best available control technology BAE = baseline actual emissions bbl = barrel bbl/day = barrel per daybhp = brake horsepower BMP = best management practices Btu = British thermal unit Btu/scf = British thermal unit per standard cubic foot or feet CAA = Clean Air Act CAM = compliance-assurance monitoring CEMS = continuous emissions monitoring systems cfm = cubic feet (per) minute CFR = Code of Federal Regulations CN = customer ID number CNG = compressed natural gas CO = carbon monoxide COMS = continuous opacity monitoring system CPMS = continuous parametric monitoring system DFW = Dallas/ Fort Worth (Metroplex) DE = destruction efficiency DRE = destruction and removal efficiency dscf = dry standard cubic foot or feet dscfm = dry standard cubic foot or feet per minute ED = (TCEQ) Executive Director EF = emissions factor EFR = external floating roof tank EGU = electric generating unit EI = Emissions Inventory ELP = El Paso EPA = (United States) Environmental Protection Agency EPN = emission point number ESL = effects screening level ESP = electrostatic precipitator FCAA = Federal Clean Air Act FCCU = fluid catalytic cracking unit FID = flame ionization detector FIN = facility identification number ft = foot or feet ft/sec = foot or feet per second g = gramgal/wk = gallon per week gal/yr = gallon per year GLC = ground level concentration GLC max = maximum (predicted) ground-level concentration

gpm = gallon per minute gr/1000scf = grain per 1000 standard cubic feet gr/dscf = grain per dry standard cubic feet H₂CO = formaldehyde H_2^{S} = hydrogen sulfide H_2SO_4 = sulfuric acid HAP = hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C HC = hydrocarbons HCI = hydrochloric acid, hydrogen chloride Hg = mercuryHGB = Houston/Galveston/Brazoria hp = horsepower hr = hourIFR = internal floating roof tank in H2O = inches of water in Hg = inches of mercury IR = infrared ISC3 = Industrial Source Complex, a dispersion model ISCST3 = Industrial Source Complex Short-Term, a dispersion model K = Kelvin; extension of the degree Celsius scaled-down to absolute zero LACT = lease automatic custody transfer LAER = lowest achievable emission rate lb = poundlb/day = pound per daylb/hr = pound per hourIb/MMBtu = pound per million British thermal units LDAR = Leak Detection and Repair (Requirements) LNG = liquefied natural gas LPG = liquefied petroleum gas LT/D = long ton per daym = meter $m^3 = cubic meter$ m/sec = meters per second MACT = maximum achievable control technology MAERT = Maximum Allowable Emission Rate Table MERA = Modeling and Effects Review Applicability mg = milligram mg/g = milligram per gram mL = milliliterMMBtu = million British thermal units MMBtu/hr = million British thermal units per hour MSDS = material safety data sheet MSS = maintenance, startup, and shutdown MW = megawatt NAAQS = National Ambient Air Quality Standards NESHAP = National Emission Standards for Hazardous Air Pollutants NGL = natural gas liquids NNSR = nonattainment new source review NO_x = total oxides of nitrogen NSPS = New Source Performance Standards PAL = plant-wide applicability limit PBR = Permit(s) by Rule PCP = pollution control project

PEMS = predictive emission monitoring system PID = photo ionization detector PM = periodic monitoring PM = total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented $PM_{2.5}$ = particulate matter equal to or less than 2.5 microns in diameter PM_{10} = total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented POC = products of combustion ppb = parts per billion ppm = parts per million ppmv = parts per million (by) volume psia = pounds (per) square inch, absolute psig = pounds (per) square inch, gage PTE = potential to emit RA = relative accuracy RATA = relative accuracy test audit RM = reference method RVP = Reid vapor pressure scf = standard cubic foot or feet scfm = standard cubic foot or feet (per) minute SCR = selective catalytic reduction SIL = significant impact levels SNCR = selective non-catalytic reduction SO_2 = 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 yearTVP = 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 98664, PSDTX1268, and N138

- 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.
- 2. All sources of air contaminants shall be physically marked in a conspicuous location with the emission point numbers (EPN:s) and/or the source names as identified on the MAERT.

Federal Applicability

- Affected facilities shall comply with applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources (NSPS), Title 40 Code of Federal Regulations (40 CFR) Part 60:
 - A. Subpart A: General Provisions.
 - B. Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
 - C. Subpart KKKK: Standards of Performance for Stationary Combustion Turbines.
- Affected facilities shall comply with applicable requirements of the EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP), 40 CFR Part 63:
 - A. Subpart A: General Provisions.
 - B. Subpart YYYY: National Emission Standard for Hazardous Air Pollutants for Stationary Combustion Turbines.
 - C. Subpart ZZZ: National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.
- 5. 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.

Emission Standards and Operating Specifications

- 6. This permit authorizes a General Electric 7EA combustion turbine (CT), rated at a maximum base-load electric output of approximately 80 megawatts (MW), operating in cogeneration cycle with a heat recovery steam generator (HRSG) with duct burner. Emissions from the combined cycle CT with HRSG duct burner (EPN: CTHRSG8) shall not exceed the following concentrations, except during periods of planned MSS activities:
 - A. Nitrogen oxides (NO_x) 2 parts per million by volume dry (ppmvd) corrected to 15 percent oxygen (O₂), on a 3-hour rolling average.
 - B. Carbon monoxide (CO) 4 ppmvd corrected to 15 percent O₂, on a 24-hour rolling average.
 - C. Volatile organic compounds (VOC) 2 ppmvd corrected to 15 percent O₂, on a 3-hour average.

- D. Ammonia (NH₃) 5 ppmvd corrected to 15 percent O₂, on a rolling 24-hour average.
- 7. The HRSG duct burner shall be limited to a maximum heat input capacity of 225 million British thermal units per hour (MMBtu/hr) based on the high heating value (HHV) of the fuel fired.
- 8. The 217 horsepower Emergency Generator is limited to 12 hours of operation per year, based on a rolling 12-month period, for non-emergency operation.
- 9. Fuel shall be limited as follows:
 - A. Fuel for the CT and HRSG duct burner is limited to pipeline-quality natural gas containing no more than 5 grains total sulfur per 100 dry standard cubic feet (dscf) on an hourly basis and 0.5 grain total sulfur per 100 dscf on an annual basis. The sulfur content shall be monitored pursuant to 40 CFR Part 60, Subpart KKKK.
 - B. Fuel fired in the Emergency Generator is limited to diesel containing no more than 15 ppm by weight sulfur.
 - C. Upon request by representatives of the Texas Commission on Environmental Quality (TCEQ), EPA, or any local air pollution control program having jurisdiction, the permit holder shall provide a sample and/or an analysis of the fuel fired or shall allow air pollution control agency representatives to obtain a sample for analysis.
- 10. Except during planned MSS activities, the opacity shall not exceed five percent averaged over a six-minute period from the stack (EPN: CTHRSG8). During MSS activities, the opacity shall not exceed 15 percent averaged over a six-minute period. Each determination shall be made by first observing for visible emissions while each facility is in operation. Observations shall be made at least 15 feet and no more than 0.25 mile from the emission point. If visible emissions are observed from an emission point, then the opacity shall be determined and documented within 24 hours of observing the visible emissions for that emission point using 40 CFR Part 60, Appendix A, Test Method 9. Contributions from uncombined water shall not be included in determining compliance with this condition. Observations shall be performed and recorded quarterly. If the opacity exceeds five percent during normal operations or 15 percent during MSS activities, corrective action to eliminate the source of visible emissions shall be taken promptly and documented within one week of first observation.
- 11. The permit holder is authorized to emit from EPN: SCRUB those emissions from EPN: WAP8 authorized under Permit Numbers 7704 and PSDTX234M2 that have been rerouted to EPN: SCRUB from the existing Unit 8 duct work at a point upstream of the Unit 8 stack and downstream of the Unit 8 air quality control systems. The emissions from EPN: SCRUB and EPN: WAP8 shall not exceed the combined maximum allowable emission rates for those EPNs authorized under this permit and Permit Numbers 7704 and PSDTX234M2.
- 12. The permit holder shall adhere to the following operational limitations and monitoring requirements to insure compliance with additional sulfur dioxide reductions and emission limitations in Permit Numbers 7704 and PSDTX234M2 as follows:
 - A. The combustion turbine (EPN: CTHRSG8) may not fire more than 1,242 million standard cubic feet of natural gas on a 12-month rolling average, unless the demonstration project scrubber system is also operational while the combustion turbine is operational.

- B. The permit holder shall operate the demonstration project scrubber system as represented in the permit application dated September 2011.
- C. The permit holder shall install continuous emissions monitoring system (CEMS) equipment as described in Special Condition No. 20 to ensure that the combined emissions from the rerouted exhaust stream vented through EPN: SCRUB combined with the reduced volume flue gas vented through EPN: WAP8 do not exceed the emission limits for NO_x and SO₂ identified in the MAERT of Permit Numbers 7704 and PSDTX234M2.

Ammonia Handling

- 13. The permit holder shall maintain the piping and valves in NH₃ service as follows:
 - A. Audio, visual, and olfactory (AVO) checks for NH₃ leaks shall be made once a day.
 - B. As soon as possible, following the detection of a leak, plant personnel shall take one or more of the following actions:
 - (1) Locate and isolate the leak, if necessary.
 - (2) Commence repair or replacement of the leaking component.
 - (3) Use a leak collection or containment system to control the leak until repair or replacement can be made if immediate repair is not possible.

Demonstration Unit Solvent Handling: Piping, Valves, Pumps, Agitators, and Compressors -Intensive Directed Maintenance - 28LAER

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

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

- (1) piping and instrumentation diagram (PID);
- (2) a written or electronic database or electronic file;
- (3) color coding;
- (4) a form of weatherproof identification; or
- (5) designation of exempted process unit boundaries.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.

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

Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through. In addition, all connectors shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program in accordance with items F thru J of this special condition.

In lieu of the monitoring frequency specified above, connectors may be monitored on a semiannual basis if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

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

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

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

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

Where:

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

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

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

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

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

- (1) a cap, blind flange, plug, or second valve must be installed on the line or valve; or
- (2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once by the end of the 72 hours period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.
- F. Accessible valves shall be monitored by leak checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program. Non-accessible valves shall be monitored by leak-checking for fugitive emissions at least annually using an approved gas analyzer with a directed maintenance program. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown. A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph.

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

A directed maintenance program shall consist of the repair and maintenance of components assisted simultaneously by the use of an approved gas analyzer such that a minimum concentration of leaking VOC is obtained for each component being maintained. Replaced components shall be re-monitored within 15 days of being placed back into VOC service.

G. All new and replacement pumps, compressors, and agitators shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. These seal systems need not be monitored and may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm

system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

All other pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly.

- Η. Damaged or leaking valves, connectors, compressor seals, pump seals, and agitator seals found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.
- I. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.
- J. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable NSPS, or an applicable NESHAP, and does not constitute approval of alternative standards for these regulations.
- K. In lieu of the monitoring frequency specified in paragraph F, valves in gas and light liquid service may be monitored on a semiannual basis if the percent of valves leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Valves in gas and light liquid service may be monitored on an annual basis if the percent of valves leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

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

L. The percent of valves leaking used in paragraph K shall be determined using the following formula:

 $(VI + Vs) \times 100/Vt = Vp$

Where:

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

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

Vt = the total number of valves in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including non-accessible and unsafe to monitor valves.

Vp = the percentage of leaking valves for the monitoring period.

M. Any component found to be leaking by physical inspection (i.e., sight, sound, or smell) shall be repaired or monitored with an approved gas analyzer within 15 days to determine whether the component is leaking in excess of 500 ppmv of VOC. If the component is found to be leaking in excess of 500 ppmv of VOC, it shall be subject to the repair and replacement requirements contained in this special condition.

Planned Maintenance, Startup, and Shutdown

- 15. The permit holder shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
- 16. This permit authorizes CT planned combustion optimization maintenance activities, which includes leak and operability checks (e.g., turbine over-speed tests, troubleshooting), balancing, and tuning activities that occur during seasonal tuning or after the completion of initial construction, a combustor change-out, a major repair, maintenance to a combustor, maintenance reliability testing, or other similar circumstances. Combustion optimization maintenance activities shall not exceed eight hours per event. (9/16)
- 17. This permit authorizes CT planned startup and shutdown activities. Emissions during planned startup and shutdown activities will be minimized by limiting the duration of operation in planned startup and shutdown modes as follows:
 - A. A startup begins with the ignition of the fuel in the combustion system, as detected by the primary flame scanner, and ends when the CT load reaches 50 percent and the SCR temperature is greater than 550°F. A planned startup for the CT is limited to four hours. (06/19)
 - B. A shutdown begins when the CT transfers from the premix mode of operation to a lean-lean mode of operation with the intent of shutting the unit down. A planned shutdown for each CT is limited to one hour.
- The CO and NH₃ mass emission limits in the MAERT attached to this permit that apply during planned MSS activities constitute alternative case specific specifications per 30 TAC Chapter 117.1225. (9/16)

Initial Determination of Compliance

- 19. Safe 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.
- 20. The permit holder shall perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere from EPNs: CTHRSG8 and SCRUB. In addition, the permit holder shall perform stack sampling and other testing if requested by the TCEQ Regional Director to establish the actual quantities of air contaminants being emitted into the atmosphere from EPNs: CTHRSG8 and SCRUB. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with EPA Test Methods or by other equivalent methods approved by the TCEQ Regional Director.

Fuel sampling using the methods and procedures of 40 CFR § 60.4415 may be conducted in lieu of stack sampling for sulfur dioxide (SO₂). If fuel sampling is used, compliance with NSPS Subpart KKKK, SO₂ limits shall be based on 100 percent conversion of the sulfur in the fuel to SO₂. Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling. The TCEQ Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling.

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

- A. The TCEQ 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 the TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

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

- B. Air contaminants and diluents to be sampled and analyzed from EPN: CTHRSG8 include (but are not limited to) NO_x, CO, VOC, PM, SO₂, NH₃, opacity, and O₂. Air contaminants to be sampled and analyzed from EPN: SCRUB include (but are not limited to) VOC and NH₃. Fuel sampling using the methods and procedures of 40 CFR § 60.4415 or 40 CFR § 60.4365(a) may be conducted for monitoring SO₂. (9/16)
- C. The turbine shall be tested at the maximum load for the atmospheric conditions which exist during testing. The tested turbine load shall be identified in the sampling report. The permit holder shall present at the pretest meeting the manner in which stack sampling will be executed in order to demonstrate compliance with emission standards found in 40 CFR Part 60, Subpart KKKK.
- D. Sampling as required by this condition shall occur within 60 days after achieving the maximum production rate at which the turbine will be operated, but no later than 180 days after initial startup of each unit. Additional sampling may be required by the TCEQ or EPA.
- E. Within 60 days after the completion of the testing and sampling required herein, two copies of the sampling reports shall be distributed as follows:
 - (1) One copy to the TCEQ Air Permits Division in Austin.
 - (2) One copy to the TCEQ Regional Office.

Continuous Determination of Compliance

- 21. The permit holder shall install, calibrate, operate, and maintain a CEMS to measure and record the concentrations of NO_x, CO, and diluent (O₂ or carbon dioxide) from the exhaust stack of EPN: CTHRSG8. In addition, the permit holder shall install, calibrate, operate, and maintain a CEMS to measure and record the concentrations of NO_x, SO₂, and diluent from the exhaust stack of EPN: SCRUB.
 - A. Monitored NO_x and CO concentrations for EPN: CTHRSG8 shall be corrected and reported in dimensional units corresponding to the emission rate and concentration limits established in this permit. Monitored NO_x and SO₂ concentrations for EPN: SCRUB shall be corrected and reported in dimensional units corresponding to the emission limits established in Permit Numbers 7704 and PSDTX234M2.
 - B. The CEMS data for EPN: CTHRSG8 shall be used to demonstrate compliance with the NO_x and CO emission limits in Special Condition No. 6 and the MAERT. The CEMS data for EPN: SCRUB shall be used to demonstrate compliance with the NO_x and SO₂ emission limits in Permit Numbers 7704 and PSDTX234M2. A valid hour consists of a minimum of 4, and normally 60, approximately equally-spaced data points.
 - C. The NO_x/diluent CEMS for EPN: CTHRSG8 shall be operated according to the methods and procedures as set out in 40 CFR § 60.4345. The NO_x, SO₂, and diluent CEMS for EPN: SCRUB shall be operated according to the methods and procedures as set out in 40 CFR § 60.49Da.
 - D. The CO CEMS shall meet the appropriate quality assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Each CO monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters if four successive quarterly CGA have been conducted for that four-quarter period. An equivalent quality-assurance method approved by

the TCEQ may also be used. Successive quarterly audits shall occur at least two months apart.

- E. Reporting of monitoring data for demonstrating compliance with NSPS Subpart KKKK and this permit for EPN: CTHRSG8 shall be conducted in accordance with the methods and procedures as set out in 40 CFR § 60.4380(b). Reporting of monitoring data for demonstrating compliance with NSPS Subpart Da and this permit for EPN: CTHRSG8 shall be conducted in accordance with the methods and procedures as set out in 40 CFR § 60.51.
- F. Compliance with the NO_x/diluent or NO_x, SO₂, and diluent continuous emissions monitor requirements above can be demonstrated by meeting the requirements of 40 CFR Part 75 provided that the permit holder demonstrates compliance with applicable NSPS regulations.
- G. The TCEQ 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.
- 22. The NH₃ concentration from the exhaust stacks (EPNs: CTHRSG8 and SCRUB) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for NH₃ slip is only required on days when the selective catalytic reduction (SCR) unit is in operation.
 - A. The permit holder may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH₃. The NH₃ concentrations shall be corrected and reported in accordance with Special Condition No. 6. Each ammonia CEMS shall be audited at least once each calendar quarter.
 - B. As an approved alternative, the NH₃ slip may be measured using a sorbent or stain tube device specific for NH₃ measurement in the 5 to 10 ppm range. The frequency of sorbent/stain tube testing shall be daily for the first 60 days of operation, after which, the frequency may be reduced to weekly testing if operating procedures have been developed to prevent excess amounts of urea from being introduced in the SCR unit and when operation of the SCR unit have been proven successful with regard to controlling NH₃ slip. Daily sorbent or stain tube testing shall resume when the catalyst is within 30 days of its useful life expectancy. These results shall be recorded and used to determine compliance with Special Condition No. 6.

If the sorbent or stain tube testing indicates an ammonia slip concentration exceeds 10 ppm for a consecutive one-hour period or the average of one or more sorbent or stain tube tests in an hour, the permit holder shall begin NH₃ testing by either the Phenol Nitroprusside Method, the Indophenol Method, or the EPA Conditional Test Method (CTM) 27 on a quarterly basis, in addition to the weekly sorbent of stain tube testing. The quarterly testing shall continue until such time as the SCR unit catalyst is replaced; or if the quarterly testing indicates NH₃ slip is 7 ppm or less, the Phenol-Nitroprusside/Indophenol/CTM 27 tests may be suspended until sorbent/stain tube testing again indicate 10 ppm NH₃ slip or greater. These results shall be recorded and used to determine compliance with Special Condition No. 6.

C. As an approved alternative to sorbent or stain tube testing or an NH₃ CEMS, the permit holder may install and operate a second NO_x CEMS probe located upstream of the SCR, which may be used in association with the SCR efficiency and NH₃ injection rate to estimate NH₃ slip. This condition shall not be construed to set a minimum NO_x reduction efficiency on the SCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 6. (9/16)

- D. As an approved alternative to sorbent or stain tube testing, NH₃ CEMS, or a second NO_x CEMS, the permit holder may install and operate a dual stream system of NO_x CEMS at the exit of the SCR. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS, and the other exhaust stream would be routed through a NH₃ converter to convert NH₃ to NO_x and then to a second NO_x CEMS. The NH₃ slip concentration shall be calculated from the difference between the two NO_x CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 6.
- E. Any other method used for measuring NH₃ slip shall require prior approval from the TCEQ.
- 23. The permit holder shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the average hourly natural gas consumption of the CT. The permit holder shall comply with the initial certification and quality assurances as specified in 40 CFR Part 75, Appendix D.

Cooling Towers

- 24. The Cooling Tower (EPN: COOLTWR8) shall not exceed a total dissolved solids (TDS) concentration of 4,400 parts per million by weight (ppmw).
 - A. A conservative default conversion factor of 0.80 (conductivity to TDS) may be used initially until a site specific demonstrated value is determined.
 - B. The permit holder shall perform sampling to establish the conductivity to TDS conversion factor that shall be used by the permit holder to demonstrate compliance in accordance with paragraph A above. A minimum of three cooling water samples shall be collected and a conductivity and TDS analysis performed for each of the three samples in order to establish the actual cooling water conductivity to TDS conversion factor. The conductivity and TDS analyses shall be performed in accordance with "Standard Methods for the Examination of Water and Wastewater" Method 2510 (Conductivity) and Method 2540 (Solids). An average conversion factor and standard deviation based on the three values shall be determined from the cooling water sample results.
 - C. A copy of the sampling report shall be kept on site.
 - D. Continuous compliance with the hourly and annual particulate matter emission rates for the Cooling Towers in the MAERT shall be demonstrated by the permit holder by monitoring the conductivity of the cooling water at a monitoring point in the recirculating water of each cooling tower, and recording these conductivity readings on a no less than weekly basis. Monitoring may be performed in any manner that produces accurate results. Each conductivity measurement shall be converted to TDS concentration in ppmw using the conductivity to TDS conversion factor established in accordance with paragraph B above.
 - E. The monitoring data required by this special condition shall be kept on site. These records shall include:
 - (1) Location of the monitoring point for the cooling tower recirculating water and date and time of monitoring.
 - (2) Weekly measured conductivity in ohms and the equivalent TDS in ppmw in the recirculating water of the cooling tower.

Nonattainment New Source Review (NNSR) - Emission Reductions

- 25. The permit holder shall comply with the following NNSR emission reductions:
 - A. The permit holder shall provide total offsets equivalent to 48.93 tons per year (tpy) of NO_x, based on 37.64 tpy of NO_x authorized, at an offset ratio of 1.3:1, prior to the start of operation of the equipment authorized under this permit.
 - B. The permit holder shall provide total offsets equivalent to 67.38 tpy of VOC, based on 51.83 tpy of VOC authorized, at an offset ratio of 1.3:1, prior to the start of operation of the equipment authorized under this permit.
 - C. Based on the rules under 30 TAC § 101.372(a) and the TCEQ and EPA approved NO_x to VOC 1:1 inter-pollutant ratio, a total of 2,022.0 tons of NO_x discrete emission reduction credits (DERCs) will be used from DERC Certificate D-2932 (Generator Certificate D-1044) to satisfy the 1.3:1 VOC offset requirement for a 30-year period. If the TCEQ approves a different NO_x to VOC ratio in the future, the permit holder may submit a request to alter this permit and revise the 1:1 inter-pollutant ratio. Any request to revise the 1:1 inter-pollutant ratio must receive approval from the TCEQ and the EPA. Any revision to the 1:1 inter-pollutant ratio would not be retroactively applied to DERCs already used at the 1:1 inter-pollutant ratio. Any unused DERCs that are no longer needed to satisfy the VOC offset requirement if the 1:1 inter-pollutant ratio is revised, or are no longer needed to satisfy the VOC offset requirement if the permit holder elects to comply with Special Condition No. 24G, will be returned to the permit holder for future use. Future rulemaking may affect the value and/or potential use of any returned credits. (5/14)
 - D. A total of 339.0 tons of NO_x DERCs will be used from DERC Certificate D-2932 (Generator Certificate D-1044) to satisfy the 0.3:1 portion of the NO_x offset requirement for a 30-year period. (5/14)
 - E. The remaining 1:1 portion of the NO_x offset requirement will be satisfied through the use of emission reduction credits (ERCs), DERCs, and/or participation in the Mass Emissions Cap and Trade (MECT) Program. If participation in the MECT program is used for any part of the 1:1 portion of the offset, at the beginning of the MECT compliance period in which a source will commence operation and at the beginning of each MECT compliance period after that, the permit holder must have sufficient MECT allowances to cover the potential to emit of that source or the portion of the potential to emit being offset through participation in the MECT program.
 - F. The 1:1 inter-pollutant ratio and DERCs used from DERC Certificate D-2932 (Generator Certificate D-1044) for the NO_x and VOC offset requirement will remain valid and available for use for a 30-year period. The permit holder must acquire additional offsets if the operation of the facility exceeds 30 years. **(5/14)**
 - G. As an alternative to complying with Special Condition No. 24C, based on the rules under 30 TAC § 101.302(f) and the TCEQ and EPA approved inter-area credit use, a total of 68.9 tpy VOC ERCs from the Dallas-Fort Worth ozone nonattainment area will be retired from Certificates 2604 and 2607 (Generator Certificates 2345 and 2361) to satisfy the 1.3:1 VOC offset requirements. The permit holder will additionally retire 12.4 tons of NO_x DERCs from the Houston-Galveston-Brazoria ozone nonattainment area each year the facilities are in operation (for a total of 372.0 tons for the proposed 30-year period) in order to use the 68.9 tpy of VOC ERCs. The 68.9 tpy VOC ERCs may not be applied as offsets for actual operation until the effective date of the EPA's final revocation of the 1997 ozone NAAQS. (5/14)

Recordkeeping Requirements

- 26. The following records shall be kept at the plant for the life of the permit and shall be made available upon request by representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction:
 - A. A copy of this permit.
 - B. The permit application dated September 19, 2011 and subsequent representations submitted to the TCEQ.
 - C. A complete copy of the testing reports and records of the initial performance testing completed pursuant to Special Condition No. 19 to demonstrate initial compliance.
 - D. Stack sampling results or other air emissions testing (other than CEMS data) that may be conducted on units authorized under this permit after the date of issuance of this permit.
- 27. The following information shall be maintained by the permit holder in a form suitable for inspection for a period of five years after collection and shall be made available upon request by representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction:
 - A. The CEMS data of NO_x, CO, and diluent emissions from EPN: CTHRSG8 to demonstrate compliance with the emission limits in the MAERT and Special Condition No. 6. The CEMS data of NO_x, SO₂, and diluent emissions from EPN: SCRUB to demonstrate compliance with the emission limits in Permit Numbers 7704 and PSDTX234M2.
 - B. Raw data files of all CEMS data including calibration checks, adjustments, and maintenance performed on these systems in a permanent form suitable for inspection.
 - C. Records of hours of operations on a rolling 12-month basis for the Emergency Generator to demonstrate compliance with Special Condition No. 8.
 - D. Records of sulfur analysis of natural gas pursuant to Special Condition No. 9.
 - E. Records of visible emission/opacity observations and date and description of corrective actions taken pursuant to Special Condition No. 10.
 - F. Records of NH₃ AVO checks and corrective actions pursuant to Special Condition No. 13.
 - G. Records as specified in Special Condition No. 14 for piping, valves, pumps, agitators, and compressors.
 - H. Records of planned MSS activities pursuant to Special Condition Nos. 16-17, including the date, time, and duration of those activities, emissions from those activities, and periods when CEMS data have been excluded for purposes of demonstrating compliance with Special Condition No. 6.
 - I. Records of NH₃ monitoring or testing pursuant to Special Condition No. 23.
 - J. Records of sampling and monitoring of the cooling tower water pursuant to Special Condition No. 5.

Reporting

28. The permit holder shall submit to the TCEQ Regional Office and the Air Enforcement Branch of EPA in Dallas (unless EPA has requested otherwise) reports as described in 40 CFR § 60.7. Such

reports are required for each emission unit which is required to be continuously monitored pursuant to this permit. **(05/18)**

Date: June 21, 2019

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 98664, PSDTX1268, and N138

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Emission	Source Name (2)	Air Contaminant	Emission Rates	
Point No. (1)		Name (3)	lbs/hour	TPY (4)
CTHRSG8	Combustion Turbine and HRSG + Duct	NO _x	9.36	37.63
	(GE 7EA, ~ 80 MW) (5)	NO _x (MSS)	52.00	
		СО	25.66	102
		CO (MSS)	450	
		VOC	3.26	12.88
		VOC (MSS)	15.50	
		PM	16.58	71.70
		PM ₁₀	16.58	71.70
		PM _{2.5}	16.58	71.70
		SO ₂	1.75	6.92
		H_2SO_4	0.62	2.44
		NH_3	8.67	34.20
COOLTWR8	Cooling Tower	PM	1.10	4.82
		PM ₁₀	0.39	1.69
		PM _{2.5}	<0.01	0.01
SCRUB	Enhanced Scrubber	VOC	24.53	37.05
		NH ₃	1.35	5.70

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Air	Conta	imina	nts	Data
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
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			lbs/hour	TPY (4)
EMGEN8	Emergency Generator (217 horsepower)	NOx	1.42	0.01
		СО	1.25	0.01
		VOC	1.42	0.01
		РМ	0.07	<0.01
		PM ₁₀	0.07	<0.01
		PM _{2.5}	0.07	<0.01
		SO ₂	0.44	<0.01
MEAFUG	MEA Fugitives (6)	VOC	0.32	1.40
NGFUG	Natural Gas Fugitives (6)	VOC	0.11	0.49
NH3FUG	Ammonia Fugitives (6)	NH ₃	0.02	0.08

Emission Sources - Maximum Allowable Emission Rates

- (1) Emission point identification either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) VOC volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
 - NO_x total oxides of nitrogen
 - SO₂ sulfur dioxide
 - PM total particulate matter, suspended in the atmosphere, including PM_{10} and $\mathsf{PM}_{2.5},$ as represented
 - PM_{10} total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
 - PM_{2.5} particulate matter equal to or less than 2.5 microns in diameter
 - CO carbon monoxide
 - H_2SO_4 sulfuric acid
 - NH₃ ammonia
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) The planned maintenance, startup, and shutdown (MSS) pounds per hour (lbs/hr) emission limits apply only during each clock hour that includes one or more minutes of MSS activities. During all other clock hours, the normal operations lbs/hr emission limits apply. The tpy emission limit for this facility includes emissions from the facility during both normal operations and planned MSS activities.
- (6) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: May 31, 2018