

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Panda Temple Power II, LLC

AUTHORIZING THE OPERATION OF
Panda Temple Power Station
Panda Temple Power Station II
Electric Services

LOCATED AT
Bell County, Texas
Latitude 31° 3' 21" Longitude 97° 19' 2"
Regulated Entity Number: RN105380216

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: 03851 Issuance Date: _____

For the Commission

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General Terms and Conditions

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

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

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

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

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

Special Terms and Conditions: Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:
 - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
 - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

- C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
 - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
 - E. Emission units subject to 40 CFR Part 63, Subpart ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.1090 which incorporates the 40 CFR Part 63 Subpart by reference.
2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
- A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
 - B. Title 30 TAC § 101.3 (relating to Circumvention)
 - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
 - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
 - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
 - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
 - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
 - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
 - I. Title 30 TAC § 101.222 (relating to Demonstrations)
 - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

- A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:
- (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
 - (ii) Title 30 TAC § 111.111(a)(1)(E)
 - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
 - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the “Applicable Requirements Summary” attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:
 - (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
 - (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.

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

on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.
 - B. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).
 - C. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
 - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
 - (ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)
 - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)
 - D. 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 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, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:

- A. Are incorporated by reference into this permit as applicable requirements
 - B. Shall be located with this operating permit
 - C. Are not eligible for a permit shield
8. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
9. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

10. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.
11. Use of Discrete Emission Credits to comply with the applicable requirements:
- A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) If applicable, offsets for Title 30 TAC Chapter 116

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

Protection of Stratospheric Ozone

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

Permit Location

- 13. 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)

- 14. 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

15. For units CTG3 and CTG4, located at the affected source identified by ORIS/Facility code 58001, 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 40 CFR Part 75.
- (ii) The emissions measurements recorded and reported in accordance with 40 CFR Part 75 and any other credible evidence shall be used to determine compliance by the affected source with the acid rain emissions limitations and emissions reduction requirements for SO₂ and NO_x under the ARP.
- (iii) The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emission of other pollutants or other emissions characteristics at the unit under other applicable requirements of the FCAA Amendments (42 U.S.C. 7401, as amended November 15, 1990) and other terms and conditions of the operating permit for the source.

C. SO₂ emissions requirements

- (i) The owners and operators of each source and each affected unit at the source shall comply with the applicable acid rain emissions limitations for SO₂.
- (ii) As of the allowance transfer deadline the owners and operators of the affected source and each affected unit at the source shall hold, in the unit's compliance subaccount, allowances in an amount not less than the total annual emissions of SO₂ for the previous calendar year.
- (iii) Each ton of SO₂ emitted in excess of the acid rain emissions limitations for SO₂ shall constitute a separate violation of the FCAA amendments.
- (iv) An affected unit shall be subject to the requirements under (i) and (ii) of the SO₂ emissions requirements as follows:
 - (1) Starting January 1, 2000, an affected unit under 40 CFR § 72.6(a)(2); or
 - (2) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR Part 75, an affected unit under 40 CFR § 72.6(a)(3).
- (v) Allowances shall be held in, deducted from, or transferred into or among Allowance Tracking System accounts in accordance with the requirements of the ARP.

- (vi) An allowance shall not be deducted, for compliance with the requirements of this permit, in a calendar year before the year for which the allowance was allocated.
- (vii) An allowance allocated by the EPA Administrator or under the ARP is a limited authorization to emit SO₂ in accordance with the ARP. No provision of the ARP, Acid Rain permit application, this Acid Rain Permit, or an exemption under 40 CFR §§ 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (viii) An allowance allocated by the EPA Administrator under the ARP does not constitute a property right.

D. NO_x Emission Requirements

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

E. Excess emissions requirements for SO₂ and NO_x.

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

F. Recordkeeping and Reporting Requirements

- (i) Unless otherwise provided, the owners and operators of the affected source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the permitting authority or the EPA Administrator.
 - (1) The certificate of representation for the designated representative for the source and each affected unit and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR § 72.24; provided that the certificate and documents shall be

retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative.

- (2) All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping (rather than a five-year period cited in 30 TAC § 122.144), the 3-year period shall apply.
 - (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the ARP or relied upon for compliance certification.
 - (4) Copies of all documents used to complete an acid rain permit application and any other submission under the ARP or to demonstrate compliance with the requirements of the ARP.
- (ii) The designated representative of an affected source and each affected unit at the source shall submit the reports required under the ARP including those under 40 CFR Part 72, Subpart I and 40 CFR Part 75.

G. Liability

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

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

Clean Air Interstate Rule Permit Requirements

16. For units CTG3 and CTG4, located at the site identified by ORIS/Facility code 58001, the designated representative and the owner or operator, as applicable, shall comply with the following Clean Air Interstate Rule (CAIR) Permit requirements. Until approval of the Texas CAIR SIP by EPA, the permit holder shall comply with the equivalent requirements of 40 CFR Part 97 in place of the referenced 40 CFR Part 96 requirements in the Texas CAIR permit and 30 TAC Chapter 122 requirements.
 - A. General Requirements
 - (i) Under 30 TAC § 122.420(b) and 40 CFR §§ 96.120(b) and 96.220(b) the CAIR Permit requirements contained here are a separable portion of the Federal Operating Permit (FOP).
 - (ii) The owners and operators of the CAIR NO_x and the CAIR SO₂ source shall operate the source and the unit in compliance with the requirements of this CAIR permit and all other applicable State and federal requirements.
 - (iii) The owners and operators of the CAIR NO_x and the CAIR SO₂ source shall comply with the General Terms and Conditions of the FOP that incorporates this CAIR Permit.
 - (iv) The term for the initial CAIR permit shall commence with the issuance of the revision containing the CAIR permit and shall be the remaining term for the FOP that incorporates the CAIR permit. Renewal of the initial CAIR permit shall coincide with the renewal of the FOP that incorporates the CAIR 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 and Reporting Requirements
 - (i) The owners and operators, and the CAIR designated representative, of the CAIR NO_x source and each CAIR NO_x unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements contained 40 CFR Part 96, Subpart HH.
 - (ii) The owners and operators, and the CAIR designated representative, of the CAIR SO₂ source and each CAIR SO₂ unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements contained 40 CFR Part 96, Subpart HHH.
 - (iii) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HH and any other credible evidence

shall be used to determine compliance by the CAIR NO_x source with the CAIR NO_x emissions limitation.

- (iv) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HHH and any other credible evidence shall be used to determine compliance by the CAIR SO₂ source with the CAIR SO₂ emissions limitation.

C. NO_x emissions requirements

- (i) As of the allowance transfer deadline for a control period, the owners and operators of the CAIR NO_x source and each CAIR NO_x unit at the source shall hold, in the source's compliance account, CAIR NO_x allowances available for compliance deductions for the control period under 40 CFR § 96.154(a) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_x units at the source, as determined in accordance with the requirements of 40 CFR Part 96, Subpart HH.
- (ii) A CAIR NO_x unit shall be subject to the requirements of paragraph C.(i) of this CAIR Permit starting on the later of January 1, 2009, or the deadline for meeting the unit's monitor certification requirements under 40 CFR § 96.170(b)(1), (2), or (5).
- (iii) A CAIR NO_x allowance shall not be deducted, for compliance with the requirements of this permit, for a control period in a calendar year before the year for which the CAIR NO_x allowance was allocated.
- (iv) CAIR NO_x allowances shall be held in, deducted from or transferred into or among CAIR NO_x Allowance Tracking System accounts in accordance with the requirements of 40 CFR Part 96, Subpart FF or Subpart GG.
- (v) A CAIR NO_x allowance is a limited authorization to emit one ton of nitrogen oxides in accordance with the CAIR NO_x Annual Trading Program. No provision of the CAIR NO_x Annual Trading Program, the CAIR permit application, the CAIR permit, or an exemption under 40 CFR § 96.105 and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.
- (vi) A CAIR NO_x allowance does not constitute a property right.
- (vii) Upon recordation by the Administrator under 40 CFR Part 96, Subpart FF or Subpart GG, every allocation, transfer, or deduction of a CAIR NO_x allowance to or from a CAIR NO_x unit's compliance account is incorporated automatically in this CAIR permit.

D. NO_x excess emissions requirement

- (i) If a CAIR NO_x source emits nitrogen oxides during any control period in excess of the CAIR NO_x emissions limitation, the owners and operators of the source and each CAIR NO_x unit at the source shall surrender the CAIR NO_x allowances required for deduction under 40 CFR § 96.154(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law.
- (ii) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AA, the Clean Air Act, and applicable State law.

E. SO₂ emissions requirements

- (i) As of the allowance transfer deadline for a control period, the owners and operators of the CAIR SO₂ source and each CAIR SO₂ unit at the source shall hold, in the source's compliance account, CAIR SO₂ allowances available for compliance deductions for the control period under 40 CFR § 96.254(a) and (b) in an amount not less than the tons of total sulfur dioxides emissions for the control period from all CAIR SO₂ units at the source, as determined in accordance with the requirements of 40 CFR Part 96, Subpart HHH.
- (ii) A CAIR SO₂ unit shall be subject to the requirements of paragraph E.(i) of this CAIR Permit starting on the later of January 1, 2010, or the deadline for meeting the unit's monitor certification requirements under 40 CFR § 96.270(b)(1), (2), or (5).
- (iii) A CAIR SO₂ allowance shall not be deducted, for compliance with the requirements of this permit, for a control period in a calendar year before the year for which the CAIR SO₂ allowance was allocated.
- (iv) CAIR SO₂ allowances shall be held in, deducted from, or transferred into or among CAIR SO₂ Allowance Tracking System accounts in accordance with the requirements of 40 CFR Part 96, Subpart FFF or Subpart GGG.
- (v) A CAIR SO₂ allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR SO₂ Trading Program. No provision of the CAIR SO₂ Trading Program, the CAIR permit application, the CAIR permit, or an exemption under 40 CFR § 96.205 and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.

- (vi) A CAIR SO₂ allowance does not constitute a property right.
- (vii) Upon recordation by the Administrator under 40 CFR Part 96, Subpart FFF or Subpart GGG, every allocation, transfer, or deduction of a CAIR SO₂ allowance to or from a CAIR SO₂ unit's compliance account is incorporated automatically in this CAIR permit.

F. SO₂ excess emissions requirements

- (i) If a CAIR SO₂ source emits sulfur dioxides during any control period in excess of the CAIR SO₂ emissions limitation, the owners and operators of the source and each CAIR SO₂ unit at the source shall surrender the CAIR SO₂ allowances required for deduction under 40 CFR § 96.254(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law.
- (ii) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AAA, the Clean Air Act, and applicable State law.

G. Recordkeeping and Reporting Requirements

- (i) Unless otherwise provided, the owners and operators of the CAIR NO_x source and each CAIR NO_x unit at the source and the CAIR SO₂ source and each CAIR SO₂ 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 Administrator.
 - (1) The certificate of representation under 40 CFR §§ 96.113 and 96.213 for the CAIR NO_x designated representative for the source and each CAIR NO_x unit and the CAIR SO₂ designated representative for the source and each CAIR SO₂ 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 documents are superseded because of the submission of a new certificate of representation under 40 CFR §§ 96.113 and 96.213 changing the CAIR designated representative.
 - (2) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HH and Subpart HHH, provided that to the extent that these subparts provide for a 3-year period for recordkeeping, the 3-year period shall apply.

- (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO_x Annual Trading Program and CAIR SO₂ Trading Program or relied upon for compliance determinations.
 - (4) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO_x Annual Trading Program and CAIR SO₂ Trading Program or to demonstrate compliance with the requirements of the CAIR NO_x Annual Trading Program and CAIR SO₂ Trading Program.
- (ii) The CAIR designated representative of a CAIR NO_x source and each CAIR NO_x unit at the source and a CAIR SO₂ source and each CAIR SO₂ unit at the source shall submit the reports required under the CAIR NO_x Annual Trading Program and the CAIR SO₂ Trading Program including those under 40 CFR Part 96, Subpart HH and Subpart HHH.
- H. The CAIR NO_x source and each CAIR NO_x unit shall meet the requirements of the CAIR NO_x Annual Trading Program contained in 40 CFR Part 96, Subparts AA through II.
- I. The CAIR SO₂ source and each CAIR SO₂ unit shall meet the requirements of the CAIR SO₂ Trading Program contained in 40 CFR Part 96, Subparts AAA through III.
- J. Any provision of the CAIR NO_x Annual Trading Program and the CAIR SO₂ Trading Program that applies to a CAIR NO_x source or CAIR SO₂ source or the CAIR designated representative of a CAIR NO_x source or CAIR SO₂ source shall also apply to the owners and operators of such source and the units at the source.
- K. Any provision of the CAIR NO_x Annual Trading Program and the CAIR SO₂ Trading Program that applies to a CAIR NO_x unit or CAIR SO₂ unit or the CAIR designated representative of a CAIR NO_x unit or CAIR SO₂ unit shall also apply to the owners and operators of such unit.
- L. No provision of the CAIR NO_x Annual Trading Program, CAIR SO₂ Trading Program, a CAIR permit application, a CAIR permit, or an exemption under 40 CFR §§ 96.105 or 96.205 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_x source or CAIR NO_x unit or a CAIR SO₂ source or CAIR SO₂ unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary 21

Applicable Requirements Summary 22

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
AUX-2	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Dc	40 CFR Part 60, Subpart Dc	No changing attributes.
ENG-3	SRIC ENGINES	N/A	60III	40 CFR Part 60, Subpart III	No changing attributes.
ENG-3	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-CCTURB	STATIONARY TURBINES	CTG3, CTG4	60KKKK	40 CFR Part 60, Subpart KKKK	No changing attributes.
GRP-STACK	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	CTG-3, CTG-4	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
AUX-2	EU	60Dc	SO ₂	40 CFR Part 60, Subpart Dc	§ 60.40c(a)	This subpart applies to each steam generating unit constructed, reconstructed, or modified after 6/9/89 and that has a maximum design heat input capacity of 2.9-29 megawatts (MW).	None	§ 60.48c(g)(1) § 60.48c(g)(2) § 60.48c(g)(3) § 60.48c(i)	[G]§ 60.48c(a) § 60.48c(j)
AUX-2	EU	60Dc	PM	40 CFR Part 60, Subpart Dc	§ 60.40c(a)	This subpart applies to each steam generating unit constructed, reconstructed, or modified after 6/9/89 and that has a maximum design heat input capacity of 2.9-29 megawatts (MW).	None	§ 60.48c(g)(1) § 60.48c(g)(2) § 60.48c(g)(3) § 60.48c(i)	[G]§ 60.48c(a) § 60.48c(j)
AUX-2	EU	60Dc	PM (OPACITY)	40 CFR Part 60, Subpart Dc	§ 60.40c(a)	This subpart applies to each steam generating unit constructed, reconstructed, or modified after 6/9/89 and that has a maximum design heat input capacity of 2.9-29 megawatts (MW).	None	§ 60.48c(g)(1) § 60.48c(g)(2) § 60.48c(g)(3) § 60.48c(i)	[G]§ 60.48c(a) § 60.48c(j)
ENG-3	EU	60III	CO	40 CFR Part 60, Subpart III	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218 § 89.112(a)	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 89.112(a).	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
ENG-3	EU	6oIII	NMHC and NO _x	40 CFR Part 60, Subpart III	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218 § 89.112(a)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than 560 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 an NMHC+NO _x emission limit of 6.4 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a).	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
ENG-3	EU	6oIII	PM (OPACITY)	40 CFR Part 60, Subpart III	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218 § 89.113(a)(1) § 89.113(a)(2) § 89.113(a)(3)	Emergency stationary CI 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 acceleration, 15% during lugging, 50% during peaks in either acceleration or lugging modes as stated in §60.4202(a)(1)-(2), (b)(2) and §89.113(a)(1)-(3) and §1039.105(b)(1)-(3).	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
ENG-3	EU	6oIII	PM	40 CFR Part 60, Subpart III	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					[G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218 § 89.112(a)	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 89.112(a).			
ENG-3	EU	63ZZZZ	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart 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-CCTURB	EU	60KKKK	NO _x	40 CFR Part 60, Subpart KKKK	§ 60.4320(a)-Table 1 § 60.4320(a) § 60.4320(b) § 60.4325 § 60.4333(a) § 60.4333(b)(1) § 60.4335(b)(1) [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 .	§ 60.4333(b)(1) § 60.4335(b)(1) [G]§ 60.4345 § 60.4350(a) § 60.4350(b) § 60.4350(c) § 60.4350(d) § 60.4350(e) § 60.4350(f) § 60.4350(h)	[G]§ 60.4345 § 60.4350(b)	[G]§ 60.4345 § 60.4350(d) § 60.4375(a) § 60.4380 [G]§ 60.4380(b) § 60.4395

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							[G]§ 60.4400(a) § 60.4400(b) § 60.4400(b)(1) § 60.4400(b)(2) § 60.4400(b)(4) § 60.4400(b)(5) § 60.4400(b)(6) [G]§ 60.4405		
GRP-CCTURB	EU	6oKkkk	SO ₂	40 CFR Part 60, Subpart Kkkk	§ 60.4330(a)(2) § 60.4333(a)	You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO ₂ /J (0.060 lb SO ₂ /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.	§ 60.4365 § 60.4365(b) § 60.4415(a) § 60.4415(a)(1) § 60.4415(a)(1)(ii)	§ 60.4365(b)	§ 60.4375(a)
GRP-STACK	EP	R1111	PM (OPACITY)	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None

Additional Monitoring Requirements

Periodic Monitoring Summary..... 27

Periodic Monitoring Summary

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

Permit Shield

Permit Shield 29

Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
GRP-BOILER	HRSG-3, HRSG-4	40 CFR Part 60, Subpart D	Heat recovery steam generators are regulated under NSPS KKKK in lieu of this subpart.
GRP-BOILER	HRSG-3, HRSG-4	40 CFR Part 60, Subpart Da	Heat recovery steam generators are regulated under NSPS KKKK in lieu of this subpart.
GRP-BOILER	HRSG-3, HRSG-4	40 CFR Part 60, Subpart Db	Heat recovery steam generators are regulated under NSPS KKKK in lieu of this subpart.
GRP-BOILER	HRSG-3, HRSG-4	40 CFR Part 60, Subpart Dc	Heat recovery steam generators are regulated under NSPS KKKK in lieu of this subpart.
GRP-CCTURB	CTG3, CTG4	40 CFR Part 60, Subpart GG	Combined-cycle turbines are regulated under NSPS KKKK in lieu of this subpart.
GRP-CCTURB	CTG3, CTG4	40 CFR Part 63, Subpart YYYY	Combined-cycle turbines are not located at a major source of HAP emissions.
GRP-COOL	CTWR-2, IAC-3, IAC-4	40 CFR Part 63, Subpart Q	Cooling towers are not located at a major source of HAP emissions.
TK-ENG3	N/A	40 CFR Part 60, Subpart Kb	Volatile organic liquid storage vessels have a capacity less than 75 cubic meters (19,813 gallons).

New Source Review Authorization References

New Source Review Authorization References31

New Source Review Authorization References by Emission Unit..... 32

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.: PSDTX1458	Issuance Date: 05/15/2015
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.: 131621	Issuance Date: 05/15/2015
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: 106.454	Version No./Date: 11/01/2001
Number: 106.471	Version No./Date: 09/04/2000
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.473	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 106.532	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

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

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
AUX-2	AUXILIARY BOILER 2	131621, PSDTX1458
CTG3	COMBINED-CYCLE UNIT 3	131621, PSDTX1458
CTG-3	COMBINED-CYCLE UNIT 3 STACK	131621, PSDTX1458
CTG4	COMBINED-CYCLE UNIT 4	131621, PSDTX1458
CTG-4	COMBINED-CYCLE UNIT 4 STACK	131621, PSDTX1458
CTWR-2	PLANT COOLING TOWER	131621, PSDTX1458
ENG-3	EMERGENCY GENERATOR ENGINE	106.511/09/04/2000
HRSG-3	HEAT RECOVERY STEAM GENERATOR 3	131621, PSDTX1458
HRSG-4	HEAT RECOVERY STEAM GENERATOR 4	131621, PSDTX1458
IAC-3	INLET AIR CHILLER SYSTEM COOLING TOWER	131621, PSDTX1458
IAC-4	INLET AIR CHILLER SYSTEM COOLING TOWER	131621, PSDTX1458
TK-ENG3	ENG-3 FUEL TANK	106.472/09/04/2000

Appendix A

Acronym List 34

Acronym List

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

ACFM	.....	actual cubic feet per minute
AMOC	.....	alternate means of control
ARP	.....	Acid Rain Program
ASTM	.....	American Society of Testing and Materials
B/PA	.....	Beaumont/Port Arthur (nonattainment area)
CAM	.....	Compliance Assurance Monitoring
CD	.....	control device
COMS	.....	continuous opacity monitoring system
CVS	.....	closed-vent system
D/FW	.....	Dallas/Fort Worth (nonattainment area)
DR	.....	Designated Representative
EIP	.....	El Paso (nonattainment area)
EP	.....	emission point
EPA	.....	U.S. Environmental Protection Agency
EU	.....	emission unit
FCAA Amendments	.....	Federal Clean Air Act Amendments
FOP	.....	federal operating permit
GF	.....	grandfathered
gr/100 scf	.....	grains per 100 standard cubic feet
HAP	.....	hazardous air pollutant
H/G/B	.....	Houston/Galveston/Brazoria (nonattainment area)
H ₂ S	.....	hydrogen sulfide
ID No.	.....	identification number
lb/hr	.....	pound(s) per hour
MMBtu/hr	.....	Million British thermal units per hour
MRRT	.....	monitoring, recordkeeping, reporting, and testing
NA	.....	nonattainment
N/A	.....	not applicable
NADB	.....	National Allowance Data Base
NO _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
PM	.....	particulate matter
ppmv	.....	parts per million by volume
PSD	.....	prevention of significant deterioration
RO	.....	Responsible Official
SO ₂	.....	sulfur dioxide
TCEQ	.....	Texas Commission on Environmental Quality
TSP	.....	total suspended particulate
TVP	.....	true vapor pressure
U.S.C.	.....	United States Code
VOC	.....	volatile organic compound

Appendix B

Major NSR Summary Table..... 36

Major NSR Summary Table

Permit Number: 131621 and PSDTX1458			Issuance Date: 05/15/2015				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
CTG-3	Combustion Turbine 3 Combined Cycle Stack, including Duct Burner and SCR System	NOx	22.00	119.66	3, 5, 7, 10, 12, 13, 14	3, 5, 7, 12, 13, 14, 16, 17, 19	3, 12, 13, 18
		NOx (5)	148.50	--			
		SO ₂	3.97	14.91			
		CO	95.70	1079.21			
		CO (5)	3184.50	--			
		VOC	13.20	107.40			
		VOC (5)	306.90	--			
		PM	15.40	52.80			
		PM ₁₀	15.40	52.80			
		H ₂ SO ₄	0.61	2.28			
NH ₃	40.70	152.48					
CTG-4	Combustion Turbine 4 Combined Cycle Stack, including Duct Burner and SCR System	NOx	22.00	119.66	3, 5, 7, 10, 12, 13, 14	3, 5, 7, 12, 13, 14, 16, 17, 19	3, 12, 13, 18
		NOx (5)	148.50	--			
		SO ₂	3.97	14.91			
		CO	95.70	1079.21			
		CO (5)	3184.50	--			
		VOC	13.20	107.40			
		VOC (5)	306.90	--			
		PM	15.40	52.80			
		PM ₁₀	15.40	52.80			
		H ₂ SO ₄	0.61	2.28			
NH ₃	40.70	152.48					
CTWR-2	Plant Cooling Tower	PM	4.05	17.74	15	15, 16, 17	15
		PM ₁₀	4.05	17.74			
IAC-3	Inlet Air Chiller System Cooling Tower	PM	0.24	1.05			
		PM ₁₀	0.24	1.05			
IAC-4	Inlet Air Chiller System Cooling Tower	PM	0.24	1.05			
		PM ₁₀	0.24	1.05			

Permit Number: 131621 and PSDTX1458

Issuance Date: 05/15/2015

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
AUX-2	Auxiliary Boiler	NOx	0.42	1.84	3, 5, 7	3, 5, 7, 16	3
		SO ₂	0.02	0.09			
		CO	1.55	6.79			
		VOC	0.25	1.10			
		PM	0.42	1.84			
		PM ₁₀	0.42	1.84			
FUG-2	Site Fugitives (6)	VOC	0.41	1.78			
HTR-3	Line Heater 3	NOx	1.18	5.17	7	7, 16	
		SO ₂	0.01	0.04			
		CO	0.99	4.34			
		VOC	0.06	0.26			
		PM	0.09	0.39			
		PM ₁₀	0.09	0.39			
HTR-4	Line Heater 4	NOx	1.18	5.17	7	7, 16	
		SO ₂	0.01	0.04			
		CO	0.99	4.34			
		VOC	0.06	0.26			
		PM	0.09	0.39			
		PM ₁₀	0.09	0.39			
LOR-4	Lube Oil Reservoir Vapor Extractor Vent	VOC	<0.01	0.01			
		PM	<0.01	0.01			
LOR-5	Lube Oil Reservoir Vapor Extractor Vent	VOC	<0.01	0.01			
		PM	<0.01	0.01			
LOR-6	Lube Oil Reservoir Vapor Extractor Vent	VOC	<0.01	0.01			
		PM	<0.01	0.01			

Footnotes:

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.

- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- NO_x - total oxides of nitrogen
- SO₂ - sulfur dioxide
- PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
- PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
- CO - carbon monoxide
- H₂SO₄ - sulfuric acid
- NH₃ - ammonia
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) Emission limits during start up, shutdown, or maintenance operations (SSM). SSM event emissions are included in annual ton per year emissions.
- (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
Panda Temple Power II, LLC
Authorizing the Construction and Operation of
Panda Temple Power Station
Located at **Temple, Bell County, Texas**
Latitude 31° 3' 21" Longitude -97° 19' 2"

Permits: 131621 and PSDTX1458

Issuance Date : May 15, 2015

Expiration Date: October 10, 2018

For the Commission

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

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

Special Conditions

Permit Numbers 131621 and PSDTX1458

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources-Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that attached table. Compliance with the annual emission limits shall be based on throughput for a rolling 12 month year rather than the calendar year. This permit authorizes start-up, shutdown, and maintenance (SSM) activities which comply with the emission limits in the maximum allowable emission rates table (MAERT).
2. Emission limits are based upon representations in the permit application for Air Quality Permit No. 83503 dated December 3, 2007, and subsequent submittals.

Federal Applicability

3. These facilities shall comply with applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations in Title 40 Code of Federal Regulations (40 CFR) Part 60 on Standards of Performance for New Stationary Sources promulgated for:
 - A. Applicable General Conditions, Subpart A.
 - B. The natural gas-fired combustion turbine generators (CTGs) are subject to the applicable requirements of Subpart KKKK, Standards of Performance for Stationary Combustion Turbines.
 - C. The auxiliary boiler is subject to the applicable requirements of Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

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.

Emissions Standards and Operating Specifications

4. Emissions from Emission Point Numbers (EPNs) CTG-3 and CTG-4 shall meet the following:
 - A. Emissions of nitrogen oxides (NO_x) from each CTG, EPNs CTG-3 and CTG-4, shall not exceed 2.0 parts per million by volume, dry basis, (ppmvd) corrected to 15% oxygen (O₂), rolling 24 hour average, subject to the following additional specifications and exclusions:
 - (1) A valid hour consists of a minimum of four, and normally 60, approximately equally spaced data points.
 - (2) Emissions occurring during start-up, shutdown or reduced load operations authorized by this permit are not included.
 - (3) Excess emissions caused by malfunction are not included.

- (4) Excess emissions during initial or other major dry low NO_x (DLN) tuning sessions are not included. Major tuning sessions are scheduled events and would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or other similar circumstances.
 - (5) During the first 24 months of operation following completion of the initial demonstration of compliance testing required by this permit, hourly average periods may be excluded from selected 24-hour averages, if the hourly average is above 2.0 ppmvd NO_x because of rapid shifts in electrical load and resulting exhaust flow or NO_x concentration, that make it impossible for the emission controller to maintain the NO_x emission average below 2.0 ppmvd. No later than the 25th month following completion of the initial demonstration of compliance, the permittee shall submit a request to the Texas Commission on Environmental Quality (TCEQ) Air Permits Division for permit alteration of this Special Condition to specify a limit to the number of hourly exclusions due to rapid load shifts. The request shall include a report identifying the date and time of each such hour during the 24-month period, the hourly average NO_x concentration, and the reason (including the entity requesting it) for the rapid change in load. In addition, the report shall identify the maximum rate of load change for which the 2.0 ppmvd NO_x concentration can be maintained. The TCEQ will alter the permit based on its review of the data and other information which may be available at the time. This exclusion applies only to this Special Condition, and not the MAERT, and does not relieve the permittee from the requirement to maintain in good working order and operate properly the NO_x emission controls.
- B. Carbon monoxide (CO) in the stack gases from each CTG, EPNs CTG-3 and CTG-4, shall be limited to 15 ppmvd, corrected to 15% O₂ on a rolling three-hour average.
 - C. The concentration of volatile organic compounds (VOCs) in the stack gases from each CTG, EPNs CTG-3 and CTG-4, shall not exceed a three-hour rolling average of 4.0 ppmvd corrected to 15% O₂.

The concentration limits in this special condition identified above only apply over each turbine's normal operating range of 60 to 100 percent of base load for CTG-3 and CTG-4. The concentration limits do not apply during start-up, shutdown or reduced load periods.

Cold start-up events shall not exceed four hours in duration per unit. Warm start-up events shall not exceed three hours in duration per unit. Shutdown events shall not exceed one and half hours in duration per unit. A cold start-up event is defined as a start-up after a unit has received no fuel flow for a period of 24 hours or more. A warm start-up event is defined as a start-up which is not a cold start-up.

Reduced load operation below 60 percent of base load not associated with SSM is authorized provided that the NO_x and CO maximum pounds per hour (lb/hr) emission rates for NO_x and CO specified in the MAERT are not exceeded.

5. Fuel for the gas turbines (CTG-3 and CTG-4) and auxiliary boiler (AUX-2) shall be limited to firing pipeline quality, sweet natural gas containing no more than 0.5 grains total sulfur per 100 dry standard cubic feet (dscf) on an hourly and annual basis.

Upon request by the Executive Director of the TCEQ or any air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel fired in the gas turbines or shall allow air pollution control agency representatives to obtain a sample for analysis.

6. The heat recovery steam generating (HRSG) duct burners shall each be limited to a maximum heat input capacity of 468 million British thermal units per hour (MMBtu/hr) based on the high heating value of the fuel-fired.
7. Opacity of emissions from any combustion turbine, auxiliary boiler, or line heater stack authorized by this permit shall not exceed 5 percent averaged over a six minute period. During periods of SSM, the opacity from the combustion turbine stacks shall not exceed 15 percent over a six minute period. Opacity shall be determined by the EPA Reference Method 9 during the initial determination of compliance stack sampling. Continuous demonstration of compliance with this special condition can be demonstrated by conducting and recording monthly visible emissions observations during normal operations. Observations shall be made at least 15 feet and no more than 0.25 mile from the emission point(s). If visible emissions are observed from the stack(s), then opacity shall be determined by Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Appendix A, Test Method 9, within 24-hours of observing visible emissions. Contributions from uncombined water shall not be included in determining compliance with this condition.

Aqueous Ammonia (NH₃)

8. Concentrations of NH₃ from each CTG, EPNs CTG-3 and CTG-4 shall not exceed 10 ppmvd when corrected to 15 percent O₂ on a three hour rolling average.
9. The permit holder shall maintain prevention and protection measures for the NH₃ storage system which includes (but is not limited to) the following:

The NH₃ storage tank area will be marked and secured so as to protect the NH₃ storage tank from accidents that could cause a rupture.

10. The permit holder shall maintain the piping and valves in NH₃ service as follows:
 - A. All operating practices and procedures relating to the handling and storage of NH₃ shall conform to the safety recommendations specified for that compound by guidelines of the American National Standards Institute and the Compressed Gas Association.
 - B. Audio, olfactory, and visual checks for NH₃ leaks within the operating area shall be made once per day.
 - C. As soon as practicable, 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.

Initial Determination of Compliance

11. 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 Waco Regional Director.
12. The holder of this permit shall perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere from EPNs CTG-3 and CTG-4. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Reference Methods.

Fuel sampling using the methods and procedures of 40 CFR § 60.334(h) may be conducted in lieu of stack sampling for sulfur dioxide (SO₂). If fuel sampling is used, compliance with New Source Performance Standards (NSPS), Subpart KKKK SO₂ limits shall be based on 100 percent conversion of the sulfur in the fuel to SO₂. Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling. The TCEQ Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling.

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

- A. The TCEQ Waco Regional Office shall be contacted as soon as testing is scheduled but not less than 30 days prior to sampling to schedule a pretest meeting.

The notice shall include:

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

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

A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Waco Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any air contaminant 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 must have EPA approval.

- B. Air contaminants and diluents from the turbines and duct burners to be sampled and analyzed include (but are not limited to) NO_x, CO, VOC, SO₂, NH₃, formaldehyde, opacity, and O₂ [As noted above, fuel sampling using the methods and procedures of 40 CFR § 60.334(h) may be conducted in lieu of stack sampling for SO₂.]
- C. Each turbine shall be tested at a minimum and maximum load of the expected operating range for the atmospheric conditions which exist during testing. Each tested turbine load shall be identified in the sampling report. Each turbine shall also be tested with duct-burner firing. 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 but no later than 180 days after initial start-up of each unit. Additional sampling shall occur as may be required by the TCEQ or EPA.
- E. Within 60 days after the completion of the testing and sampling required herein, two copies of the sampling reports shall be distributed as follows:
 - One copy to the EPA Region 6 Office, Dallas.
 - One copy to the TCEQ Waco Regional Office.

Continuous Determination of Compliance

- 13. The holder of this permit shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) to measure and record the concentrations of NO_x, and CO from each CTG, EPNs CTG-3 and CTG-4. Diluents to be measured include O₂ or carbon dioxide (CO₂). The CEMS data shall be used to determine continuous compliance with the NO_x and CO emission limitations in Special Condition No. 4 and the attached MAERT. The CEMS shall be operated according to the methods and procedures as set out in 40 CFR § 60.4345. Reporting of monitoring data shall be in accordance with methods and procedures as set out in 40 CFR § 60.7. Compliance with the continuous emissions monitor requirements above can be demonstrated by meeting the requirements of 40 CFR Part 75 provided that the holder of this permit demonstrates compliance with all applicable NSPS regulations.
- 14. The NH₃ concentration in each Exhaust Stack (EPNs CTG-3 and CTG-4) 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 holder of this permit 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. 8.
 - 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 parts per million (ppm) range. The frequency of sorbent or stain tube testing shall be daily for the first 60 days of operation, after which, the frequency may be reduced to weekly testing if operating procedures have been developed to prevent excess amounts of NH₃ from being introduced in the SCR unit and when operation of the SCR unit has 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. 8.
 - 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. 8.
 - D. If the sorbent or stain tube testing indicates an ammonia slip concentration which exceeds 7 ppm at any time, the permit holder shall begin NH₃ testing by either the Phenol Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the weekly sorbent or stain tube testing. The quarterly testing shall continue until such time as the SCR unit catalyst is replaced; or if the quarterly testing indicates NH₃ slip is 6 ppm or less, the Phenol-Nitroprusside/Indophenol/CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 7 ppm NH₃ slip or greater. These results shall be recorded and used to determine compliance with Special Condition No. 8.
 - E. 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 delta between the two NO_x CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 8.
 - F. Any other method used for measuring NH₃ slip will require prior approval from the TCEQ.
15. The Cooling Tower (EPN CTWR-2) shall not exceed a total dissolved solids (TDS) concentration of 9,000 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 holder of this permit 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 Special Condition No. 15. A cooling water sample shall be collected in each of the three calendar months following the start of commercial operation of the turbine 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. Within 30 days after completion of the sampling, copies of the sampling report shall be submitted to the TCEQ Waco Regional Office.
- D. Continuous Compliance with the lb/hr and tons per year (TPY) particulate matter emission rates for the Cooling Tower in the MAERT shall be demonstrated by the holder of this permit 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. Each conductivity measurement shall be converted to TDS concentration in ppmw using the conductivity to TDS conversion factor established in accordance with Special Condition No. 15B.

The monitoring data required by this special condition shall be kept for at least five years from the date monitoring is done, and the data shall be made available immediately upon request to EPA or TCEQ personnel. 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 parts per million in the recirculating water of the cooling tower.

Recordkeeping Requirements

- 16. The following records shall be kept at the plant for the life of the permit. All records required in this permit shall be made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction.
 - A. A copy of this permit.
 - B. Permit application for Air Quality Permit No. 83503 dated December 3, 2007, and subsequent representations for the equipment authorized by this permit 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. 12 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.
 - E. A start-up and shutdown plan required by Special Condition No. 19.
17. The following information shall be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and shall be made immediately available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction:
- A. The NO_x, CO, and diluent gases, O₂ or CO₂, CEMS emissions data to demonstrate compliance with the emission rates listed in the MAERT.
 - B. Raw data files of all CEMS data including calibration checks and adjustments and maintenance performed on these systems.
 - C. Records of fuel sampling conducted pursuant to 40 CFR Part 60, Subpart KKKK.
 - D. Records of NH₃ emissions sampling and calculations pursuant to Special Condition No. 14.
 - E. Written records of any accidental releases, spills, or venting of NH₃ and the corrective action taken.
 - F. Written records of maintenance performed to any piping and valves in NH₃ service pursuant to Special Condition No. 10.
 - G. Records to identify the times when emissions data have been excluded from the calculation of average concentration because of SSM pursuant to Special Condition No. 4 along with the justification for excluding data. The records will list maintenance activities that are performed, if applicable.
 - H. Monthly records of hourly fuel usage for the duct burners to show compliance with Special Condition No. 6.
 - I. Monthly records of TDS concentrations and circulation rates from the cooling tower pursuant to Special Condition No. 15.

Reporting

18. The holder of this permit shall submit to the TCEQ Waco Regional Office and the Air Enforcement Branch of the EPA in Dallas semiannual 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.

Start-Up and Shutdown

19. The holder of this permit shall operate the turbines and associated air pollution control equipment in accordance with good air pollution control practice to minimize emissions during start-up and shutdown by operating in accordance with a written SSM plan.

Date: May 15, 2015

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 131621 and PSDTX1458

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

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CTG-3	Combustion Turbine 3 Combined Cycle Stack, including Duct Burner and SCR System	NO _x	22.00	119.66
		NO _x (5)	148.50	---
		SO ₂	3.97	14.91
		CO	95.70	1079.21
		CO (5)	3184.50	---
		VOC	13.20	107.40
		VOC (5)	306.90	---
		PM	15.40	52.80
		PM ₁₀	15.40	52.80
		H ₂ SO ₄	0.61	2.28
		NH ₃	40.70	152.48
CTG-4	Combustion Turbine 4 Combined Cycle Stack, including Duct Burner and SCR System	NO _x	22.00	119.66
		NO _x (5)	148.50	---
		SO ₂	3.97	14.91
		CO	95.70	1079.21
		CO (5)	3184.50	---
		VOC	13.20	107.40
		VOC (5)	306.90	---
		PM	15.40	52.80
		PM ₁₀	15.40	52.80
		H ₂ SO ₄	0.61	2.28
		NH ₃	40.70	152.48

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CTWR-2	Plant Cooling Tower	PM	4.05	17.74
		PM ₁₀	4.05	17.74
IAC-3	Inlet Air Chiller System Cooling Tower	PM	0.24	1.05
		PM ₁₀	0.24	1.05
IAC-4	Inlet Air Chiller System Cooling Tower	PM	0.24	1.05
		PM ₁₀	0.24	1.05
AUX-2	Auxiliary Boiler	NO _x	0.42	1.84
		SO ₂	0.02	0.09
		CO	1.55	6.79
		VOC	0.25	1.10
		PM	0.42	1.84
		PM ₁₀	0.42	1.84
FUG-2	Site Fugitives (6)	VOC	0.41	1.78
HTR-3	Line Heater 3	NO _x	1.18	5.17
		SO ₂	0.01	0.04
		CO	0.99	4.34
		VOC	0.06	0.26
		PM	0.09	0.39
		PM ₁₀	0.09	0.39
HTR-4	Line Heater 4	NO _x	1.18	5.17
		SO ₂	0.01	0.04
		CO	0.99	4.34
		VOC	0.06	0.26
		PM	0.09	0.39
		PM ₁₀	0.09	0.39
LOR-4	Lube Oil Reservoir Vapor Extractor Vent	VOC	<0.01	0.01
		PM	<0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
LOR-5	Lube Oil Reservoir Vapor Extractor Vent	VOC	<0.01	0.01
		PM	<0.01	0.01
LOR-6	Lube Oil Reservoir Vapor Extractor Vent	VOC	<0.01	0.01
		PM	<0.01	0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
 NO_x - total oxides of nitrogen
 SO₂ - sulfur dioxide
 PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
 PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
 CO - carbon monoxide
 H₂SO₄ - sulfuric acid
 NH₃ - ammonia
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission limits during start up, shutdown, or maintenance operations (SSM). SSM event emissions are included in annual ton per year emissions.
- (6) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: May 15, 2015