

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
South Texas Electric Cooperative, Inc.

AUTHORIZING THE OPERATION OF
Red Gate Power Plant
Electric Services

LOCATED AT
Hidalgo County, Texas
Latitude 26° 27' 12" Longitude 98° 10' 14"
Regulated Entity Number: RN106534407

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

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

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

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

Permit No: O3810 Issuance Date: _____

For the Commission

Table of Contents

Section	Page
General Terms and Conditions	1
Special Terms and Conditions	1
Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting	1
New Source Review Authorization Requirements	8
Compliance Requirements.....	8
Permit Location.....	9
Permit Shield (30 TAC § 122.148)	9
Attachments	11
Applicable Requirements Summary	12
Permit Shield.....	21
New Source Review Authorization References.....	23
Appendix A	27
Acronym List	28
Appendix B	29

General Terms and Conditions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(4) Compliance Certification:

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

- C. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
- D. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).

- E. 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)
- F. 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 § 111.221 (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.

New Source Review Authorization Requirements

6. 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
7. 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.
8. 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

9. 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.
10. Use of Discrete Emission Credits to comply with the applicable requirements:

- A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) If applicable, offsets for Title 30 TAC Chapter 116
 - (iv) Temporarily exceed state NSR permit allowables

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

Permit Location

- 11. 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)

- 12. A permit shield is granted for the emission units, groups, or processes specified in the attached “Permit Shield.” Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment “Permit Shield.” Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for

this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary13

Applicable Requirements Summary 14

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
FPO1	SRIC ENGINES	N/A	60III	40 CFR Part 60, Subpart III	No changing attributes.
FPO1	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GEN01	SRIC ENGINES	N/A	60III	40 CFR Part 60, Subpart III	No changing attributes.
GEN01	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRPENG	SRIC ENGINES	ENG01, ENG02, ENG03, ENG04, ENG05, ENG06, ENG07, ENG08, ENG09, ENG10, ENG11, ENG12	60JJJJ	40 CFR Part 60, Subpart JJJJ	No changing attributes.
GRPENG	SRIC ENGINES	ENG01, ENG02, ENG03, ENG04, ENG05, ENG06, ENG07, ENG08, ENG09, ENG10, ENG11, ENG12	63ZZZZ-1	40 CFR Part 63, Subpart ZZZZ	Emission Limitation = Reducing carbon monoxide emissions from the stationary RICE
GRPENG	SRIC ENGINES	ENG01, ENG02, ENG03, ENG04, ENG05, ENG06, ENG07, ENG08, ENG09, ENG10, ENG11, ENG12	63ZZZZ-2	40 CFR Part 63, Subpart ZZZZ	Emission Limitation = Limiting formaldehyde concentration from the stationary RICE exhaust

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)
FPO1	EU	6oIII	NMHC and NO _x	40 CFR Part 60, Subpart III	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 75 KW and less than 130 KW and a displacement of less than 30 liters per cylinder and is a 2010 model year and later must comply with an NMHC+NO _x emission limit of 4.0 g/KW-hr, as listed in Table 4 to this subpart.	None	None	[G]§ 60.4214(d)
FPO1	EU	6oIII	PM	40 CFR Part 60, Subpart III	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f) § 60.4218	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 75 KW and less than 130 KW and a displacement of less than 30 liters per cylinder and is a 2010 model year and later must comply with a PM emission limit of 0.30 g/KW-hr, as listed in Table 4 to this subpart.	None	None	[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)
FPO1	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
GENo1	EU	6oIIII	CO	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 [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).	None	None	[G]§ 60.4214(d)
GENo1	EU	6oIIII	NMHC and NO _x	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 75 KW and less	None	None	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					[G]§ 60.4211(f) § 60.4218 § 89.112(a)	than or equal to 560 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with an NMHC+NOx emission limit of 4.0 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a).			
GENo1	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).	None	None	[G]§ 60.4214(d)
GENo1	EU	6oIII	PM	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	None	None	[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)
						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).			
GENo1	EU	63ZZZZ	§112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(a)(2)(i) § 63.6640(f)(1) [G]§ 63.6640(f)(2) § 63.6640(f)(3)	A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.	None	§ 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6650(a)-Table 7.4 [G]§ 63.6650(h)
GRPENG	EU	6oJJJJ	CO	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4243(g) § 60.4246	Owners and operators of stationary non-emergency natural gas engines with a maximum engine power greater than or equal to 500 HP and were manufactured on or after 07/01/2010 must comply with a CO emission limit of 2.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(e)	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4)	[G]§ 60.4245(c) § 60.4245(d)
GRPENG	EU	6oJJJJ	NO _x	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4243(g) § 60.4246	Owners and operators of stationary non-emergency natural gas engines with a maximum engine power greater than or equal to 500 HP and were manufactured on or after 07/01/2010 must comply with a NO _x emission limit of 1.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(d)	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4)	[G]§ 60.4245(c) § 60.4245(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)
GRPENG	EU	60JJJJ	VOC	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4243(g) § 60.4246	Owners and operators of stationary non-emergency natural gas engines with a maximum engine power greater than or equal to 500 HP and were manufactured on or after 07/01/2010 must comply with a VOC emission limit of 0.7 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(f) § 60.4244(g)	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4)	[G]§ 60.4245(c) § 60.4245(d)
GRPENG	EU	63ZZZZ-1	CO	40 CFR Part 63, Subpart ZZZZ	§ 63.6600(b)-Table2a.2.a § 63.6595(c) § 63.6600(b)-Table2b.1.a § 63.6600(b)-Table2b.1.b § 63.6605(a) § 63.6605(b) § 63.6625(h) § 63.6630(a) § 63.6630(b) § 63.6640(b)	For each new or reconstructed 4SLB stationary RICE with a site rating equal to or more than 500 brake HP located at major source of HAP emissions, operating at 100% load plus or minus 10%, you must reduce CO emission by 93% or more.	§ 63.6610(a) § 63.6610(b) § 63.6610(c) § 63.6615 § 63.6620(a) § 63.6620(a)-Table3.1 § 63.6620(a)-Table4.1.a.i § 63.6620(a)-Table4.1.a.ii § 63.6620(a)-Table4.1.a.iii § 63.6620(b) § 63.6620(b)(2) § 63.6620(d) § 63.6620(e)(1) [G]§ 63.6620(e)(2) [G]§ 63.6625(b) § 63.6630(a)-Table5.1.a.i § 63.6630(a)-Table5.1.a.ii § 63.6630(a)-Table5.1.a.iii § 63.6635(a) § 63.6635(b) § 63.6640(a)	§ 63.6620(i) § 63.6630(a)-Table5.1.a.iii § 63.6635(a) § 63.6635(c) § 63.6655(a) § 63.6655(a)(1) § 63.6655(a)(2) § 63.6655(a)(3) § 63.6655(a)(4) § 63.6655(a)(5) [G]§ 63.6655(b) § 63.6655(d) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6620(i) § 63.6630(c) § 63.6640(b) § 63.6640(e) § 63.6645(a) § 63.6645(c) § 63.6645(g) § 63.6645(h) § 63.6645(h)(2) § 63.6650(a) § 63.6650(a)-Table7.1.a.i § 63.6650(a)-Table7.1.a.ii § 63.6650(a)-Table7.1.b § 63.6650(a)-Table7.1.c § 63.6650(b) § 63.6650(b)(1) § 63.6650(b)(2) § 63.6650(b)(3) § 63.6650(b)(4) § 63.6650(b)(6) § 63.6650(b)(7) § 63.6650(b)(8) § 63.6650(b)(9) [G]§ 63.6650(c) [G]§ 63.6650(e) § 63.6650(f)

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)
							§ 63.6640(a)-Table6.1.a.i § 63.6640(a)-Table6.1.a.ii § 63.6640(a)-Table6.1.a.iii § 63.6640(a)-Table6.1.a.iv § 63.6640(a)-Table6.1.a.v § 63.6640(b)		
GRPENG	EU	63ZZZZ-2	FORMALD EHYDE	40 CFR Part 63, Subpart ZZZZ	§ 63.6600(b)-Table2a.2.b § 63.6595(c) § 63.6600(b)-Table2b.1.a § 63.6600(b)-Table2b.1.b § 63.6605(a) § 63.6605(b) § 63.6625(h) § 63.6630(a) § 63.6630(b) § 63.6640(b)	For each new or reconstructed 4SLB stationary RICE with a site rating equal to or more than 500 brake HP located at major source of HAP emissions, operating at 100% load plus or minus 10%, you must limit the concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 % O ₂ .	§ 63.6610(a) § 63.6610(b) § 63.6610(c) § 63.6615 § 63.6620(a) § 63.6620(a)-Table3.3 § 63.6620(a)-Table4.3.a.i § 63.6620(a)-Table4.3.a.ii § 63.6620(a)-Table4.3.a.iii § 63.6620(a)-Table4.3.a.iv § 63.6620(b) § 63.6620(b)(2) § 63.6620(d) [G]§ 63.6620(e)(2) [G]§ 63.6625(b) § 63.6630(a)-Table5.9.a.i § 63.6630(a)-Table5.9.a.ii § 63.6630(a)-Table5.9.a.iii § 63.6635(a) § 63.6635(b)	§ 63.6620(i) § 63.6630(a)-Table5.9.a.iii § 63.6635(a) § 63.6635(c) § 63.6655(a) § 63.6655(a)(1) § 63.6655(a)(2) § 63.6655(a)(3) § 63.6655(a)(4) § 63.6655(a)(5) [G]§ 63.6655(b) § 63.6655(d) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6620(i) § 63.6630(c) § 63.6640(b) § 63.6640(e) § 63.6645(a) § 63.6645(c) § 63.6645(g) § 63.6645(h)(2) § 63.6650(a) § 63.6650(a)-Table7.1.a.i § 63.6650(a)-Table7.1.a.ii § 63.6650(a)-Table7.1.b § 63.6650(a)-Table7.1.c § 63.6650(b) § 63.6650(b)(1) § 63.6650(b)(2) § 63.6650(b)(3) § 63.6650(b)(4) § 63.6650(b)(6) § 63.6650(b)(7) § 63.6650(b)(8) § 63.6650(b)(9) [G]§ 63.6650(c) [G]§ 63.6650(e) § 63.6650(f)

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)
							§ 63.6640(a) § 63.6640(a)-Table6.7.a.i § 63.6640(a)-Table6.7.a.ii § 63.6640(a)-Table6.7.a.iii § 63.6640(a)-Table6.7.a.iv § 63.6640(a)-Table6.7.a.v § 63.6640(b)		

Permit Shield

Permit Shield 22

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		
FPO1	N/A	30 TAC Chapter 112, Sulfur Compounds	Not a liquid fueled steam generator, furnace, or heater.
GEN01	N/A	30 TAC Chapter 112, Sulfur Compounds	Not a liquid fueled steam generator, furnace, or heater.
GRPENG	ENG01, ENG02, ENG03, ENG04, ENG05, ENG06, ENG07, ENG08, ENG09, ENG10, ENG11, ENG12	40 CFR Part 64, Compliance Assurance Monitoring	Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to Section 111 or 12 of the Act.
GRPENG	ENG01, ENG02, ENG03, ENG04, ENG05, ENG06, ENG07, ENG08, ENG09, ENG10, ENG11, ENG12	40 CFR Part 72	New units with a total nameplate capacity of 25 MWe or less.

New Source Review Authorization References

New Source Review Authorization References 24

New Source Review Authorization References by Emission Unit..... 25

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.: PSDTX1322	Issuance Date: 12/20/2013
PSD Permit No.: PSD-TX-1322-GHG	Issuance Date: 02/19/2015
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.: 106544	Issuance Date: 12/20/2013

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
ENG01	SI RICE	106544, PSDTX1322
ENG02	SI RICE	106544, PSDTX1322
ENG03	SI RICE	106544, PSDTX1322
ENG04	SI RICE	106544, PSDTX1322
ENG05	SI RICE	106544, PSDTX1322
ENG06	SI RICE	106544, PSDTX1322
ENG07	SI RICE	106544, PSDTX1322
ENG08	SI RICE	106544, PSDTX1322
ENG09	SI RICE	106544, PSDTX1322
ENG10	SI RICE	106544, PSDTX1322
ENG11	SI RICE	106544, PSDTX1322
ENG12	SI RICE	106544, PSDTX1322
FPO1	FIRE PUMP ENGINE	106544, PSDTX1322
GEN01	EMERGENCY GENERATOR	106544, PSDTX1322

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations issued by EPA 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
ENG01	SI RICE	PSD-TX-1322-GHG
ENG02	SI RICE	PSD-TX-1322-GHG
ENG03	SI RICE	PSD-TX-1322-GHG
ENG04	SI RICE	PSD-TX-1322-GHG
ENG05	SI RICE	PSD-TX-1322-GHG
ENG06	SI RICE	PSD-TX-1322-GHG
ENG07	SI RICE	PSD-TX-1322-GHG
ENG08	SI RICE	PSD-TX-1322-GHG
ENG09	SI RICE	PSD-TX-1322-GHG
ENG10	SI RICE	PSD-TX-1322-GHG
ENG11	SI RICE	PSD-TX-1322-GHG
ENG12	SI RICE	PSD-TX-1322-GHG
FPO1	FIRE PUMP ENGINE	PSD-TX-1322-GHG
GEN01	EMERGENCY GENERATOR	PSD-TX-1322-GHG

Appendix A

Acronym List 28

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
ELP	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
GHG	Greenhouse Gas
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.....30

Major NSR Summary Table

Permit Number: PSD-TX-1322-GHG				Issuance Date: 2/19/2015								
Emission Point Number ¹	Source Name ²	Air Contaminant Name	Emissions Rates ^{3,4}		Monitoring and Testing Requirement	Recordkeeping Requirements	Reporting Requirement					
			TPY ⁴	TPY CO ₂ e ⁵	Special Condition	Special Condition	Special Condition					
ENG01	4 stroke lean burn RICE	CO ₂	727,830 ⁶	728510	III.A.2.d, VI.A, VI.I	III.A.2.d, III.A.3.c, IV.A.1-4, IV.B, IV.C, IV.D, IV.E	IV.E, VI.B					
ENG02												
ENG03												
ENG04		CH ₄	12.3 ⁶									
ENG05												
ENG06												
ENG07												
ENG08		N ₂ O	1.25 ⁶									
ENG09												
ENG10												
ENG11		Diesel Black Start Emergency Diesel	CO ₂					13.94	13.98	III.B.5, VI.J	III.B.4, III.B.5, IV.A.1-2, IV.B, IV.C, IV.D, IV.E	III.B.5, IV.E
GEN01			CH ₄					No Numerical Limit Established ⁷				
	N ₂ O		No Numerical Limit Established ⁷									
FP01	Firewater Pump Engine	CO ₂	3.10	3.11	III.C.2, III.C.3	III.C.3, IV.A.1-2, IV.B, IV.C, IV.D, IV.E	III.C.3, IV.E					
		CH ₄	No Numerical Limit Established ⁷									
		N ₂ O	No Numerical Limit Established ⁷									

Emission Point Number ¹	Source Name ²	Air Contaminant Name	Emissions Rates ^{3,4}		Monitoring and Testing Requirement	Recordkeeping Requirements	Reporting Requirement
			TPY ⁴	Special Condition	Special Condition	Special Condition	Special Condition
FP01	Firewater Pump Engine	CO ₂	3.10	3.11	III.C.2, III.C.3	III.C.3, IV.A.1-2, IV.B, IV.C, IV.D, IV.E	III.C.3, IV.E
		CH ₄	No Numerical Limit Established ⁷				
		N ₂ O	No Numerical Limit Established ⁷				
CB-FUG01	Fugitive SF6 Circuit Breaker Emissions	SF ₆	No Numerical Limit Established ⁸	No Numerical Limit Established ⁸	III.D.3	IV.B, IV.C, IV.D, IV.E	IV.E
CB-FUG02							
NGFUG	Components Fugitive Leak Emissions	CO ₂	No Numerical Limit Established ⁹	No Numerical Limit Established ⁹	III.E.2	III.E.4, IV.B, IV.C, IV.D, IV.E	IV.E
		CH ₄	No Numerical Limit Established ⁹				

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) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period
- (4) The TPY emission limits specified in this table are not to be exceeded for this facility and include emissions from the facility during all operations and include MSS activities.
- (5) Global Warming Potentials (GWP): CO₂=1, CH₄=25, N₂O=298, SF₆=22,800
- (6) The GHG mass basis TPY limit and the CO₂e TPY limit is a combined limit for the aggregate of the twelve (12) natural gas fired SI RICE
- (7) These values indicated as "No Numerical Limit Established" are less than 0.01 TPY with appropriate rounding. The emission limit will be a design/work practice standard as specified in the permit.
- (8) SF₆ fugitive emissions from EPNs CB-FUG01 and CB-FUG02 are estimated to be 0.001 TPY of SF₆ and 22.8 TPY CO₂e. In lieu of an emission limit, the emissions will be limited by implementing a design/work practice standard as specified in the permit.
- (9) Fugitive Leak Emissions from EPN NGFUG are estimated to be 0.319 TPY CO₂, 10.284 TPY CH₄ and 270.9 TPY CO₂e. In lieu of an emission limit, the emissions will be limited by implementing a design/work practice standard as specified in the permit.

Major NSR Summary Table

Permit Number: 106544 and PSD-TX-1322			Issuance Date: 12/20/13					
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.	
ENG01-ENG12	Engines 1 through 12 ⁽⁵⁾	NOx	4.66	20.40	12, 15, 16, 18	12, 15, 16, 18, 22, 23	12, 15	
ENG01-ENG12		CO	5.95	26.07	12, 15, 16, 18	12, 15, 16, 18, 22, 23	12, 15	
ENG01-ENG12		VOC	5.95	26.07	12, 15, 18	12, 15, 18, 22, 23	12, 15	
ENG01-ENG12		SO2	0.44	1.91	11, 12, 18	12, 18, 23	12	
ENG01-ENG12		PM	3.10	13.59	5, 12, 18	12, 18,23	12	
ENG01-ENG12		PM10	3.10	13.59	5, 12, 18	12, 18,23	12	
ENG01-ENG12		PM2.5	3.10	13.59	5, 12, 18	12, 18,23	12	
ENG01-ENG12		H2SO4	0.07	0.29	9, 12, 18	12, 18,23	12	
ENG01-ENG12		Formaldehyde ⁽⁶⁾	0.39	1.71	12, 18	12, 18	12	
ENG01-ENG12		NH3	2.15	9.42	12, 15, 17, 18	12, 15, 17, 18, 22, 23	12, 15	
ENG01-ENG12		Engines 1 through 12 Startup and Shutdown ⁽⁵⁾	NOx	19.74	--			
ENG01-ENG12			CO	19.51	--			
ENG01-ENG12			VOC	15.54	--			
ENG01-ENG12	SO2		0.44	--	9			
ENG01-ENG12	PM		4.42	--				
ENG01-ENG12	PM10		4.42	--				
ENG01-ENG12	PM2.5		4.42	--				
ENG01-ENG12	H2SO4		0.07	--	9			
ENG01-ENG12	Formaldehyde ⁽⁶⁾		0.39	--				
GEN01	Black Start Generator (500 hrs/yr) ⁽⁷⁾		NOx	3.31	0.83	12	12, 23	12
GEN01		CO	3.86	0.96	12	12, 23	12	
GEN01		VOC	1.10	0.28	12	12, 23	12	
GEN01		SO2	0.008	0.002	12	12, 23	12	
GEN01		PM	0.22	0.06	12	12, 23	12	
GEN01		PM10	0.22	0.06	12	12, 23	12	
GEN01		PM2.5	0.22	0.06	12	12, 23	12	

Permit Number: 106544 and PSD-TX-1322

Issuance Date: 12/20/13

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.
FP01	Fire Pump Engine (100 hrs/yr) ⁽⁷⁾	NOx	0.83	0.04	12	12, 23	12
FP01		CO	1.00	0.05	12	12, 23	12
FP01		VOC	0.17	0.01	12	12, 23	12
FP01		SO2	0.31	0.02	12	12, 23	12
FP01		PM	0.07	0.004	12	12, 23	12
FP01		PM10	0.07	0.004	12	12, 23	12
FP01		PM2.5	0.07	0.004	12	12, 23	12
NH3FUG		Ammonia Piping Fugitives ⁽⁸⁾	NH3	0.10	0.44	21	23
NGFUG	Natural Gas Piping Fugitives ⁽⁸⁾	VOC	<0.05	0.19			
ENGVENT	Engine Fuel Venting at Shutdown ⁽⁵⁾	VOC	<0.01	<0.02			

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
 NOx - total oxides of nitrogen
 SO2 - sulfur dioxide
 PM - total particulate matter, suspended in the atmosphere, including PM10 and PM2.5, as represented
 PM10 - total particulate matter equal to or less than 10 microns in diameter, including PM2.5, as represented
 PM2.5 - particulate matter equal to or less than 2.5 microns in diameter
 CO - carbon monoxide
 NH3 - ammonia
 H2SO4 - sulfuric acid
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) The emission rates apply per engine and not to the group as a whole.
- (6) Formaldehyde emissions are not included in the VOC emission rates listed.
- (7) Allowable emission rates include planned startup and shutdown.
- (8) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

US EPA ARCHIVE DOCUMENT

**PREVENTION OF SIGNIFICANT DETERIORATION PERMIT
FOR GREENHOUSE GAS EMISSIONS
ISSUED PURSUANT TO THE REQUIREMENTS AT 40 CFR § 52.21**

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 6

PSD PERMIT NUMBER: PSD-TX-1322-GHG

PERMITTEE: South Texas Electric Cooperative, Inc.
P.O. Box 119
Nursery, TX 77976

FACILITY NAME: Red Gate Power Plant

FACILITY LOCATION: 3428 West FM 490
Edinburg, TX 78541

Pursuant to the provisions of the Clean Air Act (CAA), Subchapter I, Part C (42 U.S.C. Section 7470, *et seq.*), and the Code of Federal Regulations (CFR) Title 40, Section 52.21, and the Federal Implementation Plan at 40 CFR § 52.2305 (effective May 1, 2011 and published at 76 FR 25178), the U.S. Environmental Protection Agency, Region 6 is issuing a *Prevention of Significant Deterioration* (PSD) permit to South Texas Electric Cooperative, Inc. (STEC) for greenhouse gas (GHG) emissions. The permit authorizes the construction of the Red Gate Power Plant, located at 3428 West FM 490, Edinburg, Texas.

STEC is authorized to construct the Red Gate Power Plant as described herein, in accordance with the permit application (and plans submitted with the permit application), the federal PSD regulations at 40 CFR § 52.21, and other terms and conditions set forth in this PSD permit in conjunction with the corresponding Texas Commission on Environmental Quality (TCEQ) PSD Permit PSD-TX-1322. Failure to comply with any condition or term set forth in this PSD permit may result in enforcement action pursuant to Section 113 of the Clean Air Act (CAA). This PSD permit does not relieve STEC of the responsibility to comply with any other applicable provisions of the CAA (including applicable implementing regulations in 40 CFR Parts 51, 52, 60, 61, 72 through 75, and 98) or other federal and state requirements (including the state PSD program that remains under approval at 40 CFR § 52.2303).

In accordance with 40 CFR § 124.15(b), this PSD permit becomes effective 30 days after the service of notice of this final decision unless review is requested on the permit pursuant to 40 CFR § 124.19.



Wren Stenger, Director
Multimedia Planning and Permitting Division

2/19/15

Date

**Red Gate Power Plant. (PSD-TX-1322-GHG)
Prevention of Significant Deterioration Permit
For Greenhouse Gas Emissions
Draft Permit Conditions**

PROJECT DESCRIPTION

Pursuant to the conditions of this permit, STEC will construct the Red Gate Power Plant near Edinburg, Texas. The primary objective of the proposed project is to construct an electric generating station that will be used during periods of increased demand for electricity. Due to the fluctuations in power requirements, the twelve new 18.76 MW (each) natural gas-fired spark ignition reciprocating internal combustion engines are proposed to provide a fast ramp up for electricity generation. In addition, the project also includes the installation of an emergency generator, firewater pump engine, circuit breakers and fugitive emissions at their new facility.

EQUIPMENT LIST

The following devices are subject to this GHG PSD permit:

FIN	EPN	Description
ENG01 ENG02 ENG03 ENG04 ENG05 ENG06 ENG07 ENG08 ENG09 ENG10 ENG11 ENG12	ENG01 ENG02 ENG03 ENG04 ENG05 ENG06 ENG07 ENG08 ENG09 ENG10 ENG11 ENG12	Twelve 18.76 MW (each, nominal net) spark ignition reciprocating internal combustion engines fired with natural gas.
GEN01	GEN01	500 kW diesel-fired emergency black start generator. Total annual operation is limited to 100 hours per year.
FP01	FP01	Diesel fire pump (150 hp, not to exceed) engine. In addition to emergency fire suppression activities, the unit is limited to 100 hours per year for maintenance and testing.
CB-FUG01 CB-FUG02	CB-FUG01 CB-FUG02	Fugitive SF ₆ circuit breaker emissions
NGFUG	NGFUG	Fugitive emissions from various piping components

I. GENERAL PERMIT CONDITIONS

A. PERMIT EXPIRATION

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

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

Pursuant to 40 CFR § 52.21(r), EPA may extend the 18-month period upon a written satisfactory showing that an extension is justified.

B. PERMIT NOTIFICATION REQUIREMENTS

Permittee shall notify EPA Region 6 in writing or by electronic mail of the:

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

C. FACILITY OPERATION

At all times, including periods of startup, shutdown, and malfunction, Permittee shall maintain and operate the facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to EPA, which may include, but is not limited to, monitoring results, review of operating maintenance procedures and inspection of the facility.

D. MALFUNCTION REPORTING

1. Permittee shall notify EPA by mail, or other means identified by EPA within 48 hours following the discovery of any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in GHG emissions above the allowable emission limits stated in Section II and III of this permit.
2. Within 10 days of the restoration of normal operations after any failure described in I.D.1.,

Permittee shall provide a written supplement to the initial notification that includes a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in Section II and III, and the methods utilized to mitigate emissions and restore normal operations.

3. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or any law or regulation such malfunction may cause.

E. RIGHT OF ENTRY

EPA authorized representatives, upon the presentation of credentials, shall be permitted:

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

F. TRANSFER OF OWNERSHIP

In the event of any changes in control or ownership of the facilities to be constructed, this PSD permit shall be binding on all subsequent owners and operators. Permittee shall notify the succeeding owner and operator of the existence of the PSD permit and its conditions by letter; a copy of the letter shall be forwarded to EPA Region 6 within thirty days of the letter signature.

G. SEVERABILITY

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

H. ADHERENCE TO APPLICATION AND COMPLIANCE WITH OTHER ENVIRONMENTAL LAWS

Permittee shall construct and operate this project in compliance with this PSD permit, the application on which this permit is based, the TCEQ PSD Permit PSD-TX-1322 and all other applicable federal, state, and local air quality regulations. This PSD permit does not release the Permittee from any liability for compliance with other applicable federal, state and local environmental laws and regulations, including the Clean Air Act.

I. ACRONYMS AND ABBREVIATIONS

BACT	Best Available Control Technology
bbbl	Barrel
Btu	British Thermal Unit
CAA	Clean Air Act
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CGA	Cylinder Gas Audit
CH ₄	Methane
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DRE	Destruction and Removal Efficiency
dscf	Dry Standard Cubic Foot
EPN	Emission Point Number
FR	Federal Register
GHG	Greenhouse Gas
gr	Grains
HHV	High Heating Value
hp	Horsepower
Hr	Hour
IFR	Internal Floating Roof
LDAR	Leak Detection and Repair
LHV	Lower Heating Value
Lb	Pound
MMBtu	Million British Thermal Units
MMSCFD	Million Standard Cubic Feet per Day
MSS	Maintenance, Start-up and Shutdown
NGL	Natural Gas Liquids
N ₂ O	Nitrous Oxides
NSPS	New Source Performance Standards
PSD	Prevention of Significant Deterioration
QA/QC	Quality Assurance and/or Quality Control
RATA	Relative Accuracy Test Audit
RICE	Reciprocal Internal Combustion Engine
SCFH	Standard Cubic Feet per Hour
SCR	Selective Catalytic Reduction
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TO	Thermal Oxidizer
TPY	Tons per Year
VRU	Vapor Recovery Unit
USC	United States Code

II. ANNUAL FACILITY EMISSION LIMITS

Annual emissions, in tons per year (TPY) on a 12-month rolling total, shall not exceed the following:

Table 1. Facility Emission Limits¹

FIN	EPN	Description	GHG Mass Basis		TPY CO ₂ e ^{1,2}	BACT Requirements
				TPY ¹		
ENG01 ENG02 ENG03 ENG04 ENG05 ENG06 ENG07 ENG08 ENG09 ENG10 ENG11 ENG12	ENG01 ENG02 ENG03 ENG04 ENG05 ENG06 ENG07 ENG08 ENG09 ENG10 ENG11 ENG12	4 Stroke Lean Burn SI RICE	CO ₂	727,830 ³	728,510 ³	- BACT limit of 1,145 lb CO ₂ /MW-hr (gross) on a 12-month rolling average basis. - Not to exceed a total 67,771 hours on a 12-month rolling basis for the engines. - See permit conditions III.A.
			CH ₄	12.3 ³		
			N ₂ O	1.25 ³		
GEN01	GEN01	Diesel Black Start Emergency Generator	CO ₂	13.94	13.98	- Not to exceed 100 hours of non-emergency operation on a 12-month rolling basis. - Use of Good Combustion Practices. See permit conditions III.B.
			CH ₄	No Numerical Limit Established ⁴		
			N ₂ O	No Numerical Limit Established ⁴		
FP01	FP01	Firewater Pump Engine	CO ₂	3.10	3.11	- Not to exceed 100 hours of operation on a 12-month rolling basis. - Use of Good Combustion Practices. See permit conditions III.C.
			CH ₄	No Numerical Limit Established ⁴		
			N ₂ O	No Numerical Limit Established ⁴		
CB-FUG01 CB-FUG02	CB-FUG01 CB-FUG02	Fugitive SF ₆ Circuit Breaker Emissions	SF ₆	No Numerical Limit Established ⁵	No Numerical Limit Established ⁵	Work Practices. See permit conditions III.D.
NGFUG	NGFUG	Components Fugitive Leak Emissions	CO ₂	No Numerical Limit Established ⁶	No Numerical Limit Established ⁶	Implementation of AVO LDAR Program. See permit conditions III.E.
			CH ₄	No Numerical Limit Established ⁶		

Totals⁷	CO₂	727,847.07	728,820	
	CH₄	23.1		
	N₂O	1.25		
	SF₆	0.001		

1. The TPY emission limits specified in this table are not to be exceeded for this facility and include emissions from the facility during all operations and include MSS activities.
2. Global Warming Potentials (GWP): CO₂=1, CH₄ = 25, N₂O = 298, SF₆=22,800
3. The GHG Mass Basis TPY limit and the CO₂e TPY limit is a combined limit for the aggregate of the twelve (12) natural gas fired SI RICE.
4. These values indicated as "No Numerical Limit Established" are less than 0.01 TPY with appropriate rounding. The emission limit will be a design/work practice standard as specified in the permit.
5. SF₆ fugitive emissions from EPNs CB-FUG01 and CB-FUG02 are estimated to be 0.001 TPY of SF₆ and 22.8 TPY CO₂e. In lieu of an emission limit, the emissions will be limited by implementing a design/work practice standard as specified in the permit.
6. Fugitive Leak Emissions from EPN NGFUG are estimated to be 0.319 TPY CO₂, 10.824 TPY CH₄, and 270.9 TPY CO₂e. In lieu of an emission limit, the emissions will be limited by implementing a design/work practice standard as specified in the permit.
7. Total emissions include the PTE for fugitive emissions. Totals are given for informational purposes only and do not constitute emission limits.

III. SPECIAL PERMIT CONDITIONS

A. Requirements for the Spark Ignition Reciprocating Internal Combustion Engines (EPNs: ENG01-ENG12)

1. **Fuel Specifications:** The fuel for each engine shall be pipeline quality natural gas.
2. **SI RICE BACT Requirements:**
 - a. The Permittee shall install twelve (12) 18.76-MW Wartsila (Model 18V50SG) lean burn natural gas-fired spark ignition reciprocating internal combustion engines or their equivalent.
 - b. The BACT limit of 1,145 lbs CO₂/MW-hr gross output applies to each engine.
 - c. The engines (EPNs ENG01-ENG12) may operate up to a combined total 67,771 hours on a 12-month rolling basis, which shall include periods of startup and shutdown.
 - d. The engines shall have fuel metering for each fuel, and Permittee shall:
 - i. Measure and record the fuel flow rate using an operational non-resettable elapsed flow meter or by recording the flow rate data in an electronic format with individual flow measurements being taken no less frequently than once every 15 minutes. Electronic data may be reduced to hourly averages for recordkeeping purposes.
 - ii. Record the total fuel combusted for each fuel monthly.
 - iii. The fuel flow of the fuel fired in the combustion engines shall be continuously monitored and recorded.
 - iv. The gross energy output [MWh (gross)] for each engine shall be measured and recorded on an hourly basis.
 - d. Permittee shall calibrate and perform preventative maintenance check of the fuel gas flow meters and document annually.
 - e. All analyzers identified in this section III.A.2.d. shall achieve 95% on-stream time or greater.
3. **Engine Work Practice and Operational Requirements:**
 - a. Permittee shall calculate daily the amount of CO₂ emitted from combustion in tons/yr using equation C-1 in 40 CFR Part 98 Subpart C, converted to short tons. Compliance shall be based on a 12-month rolling basis to be updated by the last day of the following month.
 - b. Permittee shall calculate daily the CH₄ and N₂O emissions which shall be updated by the last day of the following month. Permittee shall determine compliance on a 12-month rolling basis with the CH₄ and N₂O emissions limits contained in this section using the default CH₄ and N₂O emission factors contained in Table C-2 and equation C-8a of 40 CFR Part 98 converted to short tons.
 - c. Permittee shall determine the CO₂e emissions on a 12-month rolling basis, based on the procedures and Global Warming Potentials (GWP) contained in Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1. The record shall be updated by the last day of the following month.

4. Startup and Shutdown Requirements for Engines (EPNs: ENG01-ENG12):

- a. Permittee shall minimize emissions during startup and shutdown activities by operating and maintaining the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
- b. Emissions during each startup and shutdown activity as well as annual startup and shutdown activities shall be minimized by limiting the duration of operation in startup and shutdown mode
- c. Startups and shutdowns are limited to no more than 730 events per engine on a 12-month rolling basis.
- d. Permittee is still subject to the BACT limitation in III.A.2.b. during startup and shutdown.

B. Requirements for the Diesel Black Start Emergency Generator (EPN: GEN01)

1. The emergency generator engine shall be rated at 500 kW and shall be diesel fired.
2. The generator engine shall not exceed 100 hours of non-emergency operation on a 12-month rolling basis.
3. On or after initial startup, the Permittee shall not discharge or cause the discharge of emissions in excess of 13.98 tons CO₂e/year, based on a 12-month rolling average.
4. Permittee shall maintain a file of all records, data measurements, reports and documents related to the operation of the Emergency Generator, including but not limited to, the following: all records related to performance tests and monitoring; diesel fuel oil delivery; hours of operation; and all other information required by this permit recorded in a permanent form suitable for inspection. The file must be retained for not less than five years following the date of such measurements, maintenance, reports and records.
5. The Engine shall meet the requirements of 40 CFR Part 60 Subpart IIII.
6. Compliance with the Annual Emission Limit shall be demonstrated on a 12-month total, rolling monthly, calculated in accordance with 40 CFR § 98.33(a)(1)(i).

C. Requirements for the Firewater Pump Engine (EPN: FP01)

1. The firewater pump shall not exceed 100 hours of non-emergency operation on a 12-month rolling basis and shall be operated and maintained in accordance with the manufacturer's recommendations.
2. The Permittee shall install and maintain an operational non-resettable elapse time meter for the firewater pump.
3. The engine shall meet the requirements of 40 CFR Part 60 Subpart IIII.
4. The emergency firewater pump engine purchased will be certified to meet the applicable emission standards of 40 CFR § 60.4205(c).
5. Compliance with the Annual Emission Limit shall be demonstrated on a 12-month total, rolling monthly, calculated in accordance with 40 CFR § 98.33(a)(1)(i).

D. Requirements for the Fugitive SF₆ Circuit Breaker (EPNs: CB-FG01 and CB-FUG02)

1. SF₆ emissions shall be calculated annually (calendar year) in accordance with the mass balance approach provided in equation DD-1 of the Mandatory Greenhouse Gas Reporting Rule for Electrical Transmission and Distribution Equipment Use, 40 CFR Part 98, Subpart

DD.

2. The total SF₆ inventory of circuit breakers shall not exceed two, 200-pound enclosed-pressure circuit breaker units with leak detection.
3. The circuit breakers shall be equipped with a low pressure alarm and low pressure lockout. The SF₆ leak detection system shall be able to detect a leak of at least one pound per year.

E. Requirements for the Components Fugitive Leaks (EPN: NGFUG)

1. The Permittee shall implement an auditory/visual/olfactory (AVO) monitoring program for detecting leaking in fuel gas and natural gas piping components, including valves and flanges.
2. AVO monitoring shall be performed daily.
3. Any component found to be leaking during AVO monitoring shall be repaired within 15 days.
4. Records of the annual and monthly AVO monitoring results must be maintained on site.

IV. RECORDKEEPING REQUIREMENTS

- A. In order to demonstrate compliance with the GHG emission rates, the Permittee will monitor the following parameters and summarize the data on a calendar month basis.
 1. Operating hours for all air emission sources;
 2. The fuel usage for all combustion sources, using continuous fuel flow monitors (a group of equipment can utilize a common fuel flow meter, as long as actual fuel usage is allocated to the individual equipment based upon actual operating hours and maximum firing rate);
 3. Annual fuel sampling for natural gas; and
 4. The daily throughput of natural gas.
- B. For each calendar month, the Permittee will calculate the 12-month rolling GHG emission rates for comparison to Table 1.
- C. The Permittee will also maintain site-specific procedures for best/optimum maintenance practices and vendor-recommended operating procedures and O&M manuals. These manuals must be maintained with the permit and located on-site.
- D. Permittee shall maintain a file of all records, data, measurements, reports, and documents related to the operation of the facility, including, but not limited to, the following: all records or reports pertaining to significant maintenance performed on any system or device at the facility; the occurrence and duration of any startup, shutdown, or malfunction; all records relating to performance tests and monitoring of combustion equipment; calibrations, checks, duration of any periods during which a monitoring device is inoperative, and corresponding emission measurements; and all other information required by this permit recorded in a permanent form suitable for inspection. The file must be retained for not less than five years following the date of such measurements, maintenance, reports, and/or records.
- E. Permittee shall maintain records and submit a written report of all excess emissions to EPA semi-annually, except when more frequent reporting is specifically required by an applicable subpart or the Administrator or authorized representative, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. The report is due on the 30th day following the end of each semi-annual period and shall include the following:
 1. Time intervals, data and magnitude of the excess emissions, the nature and cause (if

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

V. SHAKEDOWN PERIODS

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

VI. PERFORMANCE TESTING REQUIREMENTS:

- A. The holder of this permit shall perform an initial stack test to establish the actual quantities of air contaminants being emitted into the atmosphere from emission units the 12 engines (EPN ENG01-ENG12) to determine the initial compliance with the CO₂ emission limits established in this permit. Sampling shall be conducted in accordance with 40 CFR § 60.8 and EPA Method 3a or 3b for the concentration of CO₂.
- 1. Multiply the CO₂ hourly average emission rate determined under maximum operating test conditions by 5,468 hours.
 - 2. If the above calculated CO₂ emission total does not exceed the tons per year (TPY) specified on Table 1, no compliance strategy needs to be developed.
 - 3. If the above calculated CO₂ emission total exceeds the tons per year (TPY) specified in Table 1, the facility shall:
 - a. Document the exceedance in the test report; and
 - b. Explain within the report how the facility will assure compliance with the CO₂ emission limit listed in Table 1.
- B. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility, performance tests(s) must be conducted and a written report of the performance testing results furnished to the EPA. Additional sampling may be required by TCEQ or EPA.
- C. Permittee shall submit a performance test protocol to EPA no later than 30 days prior to the test to allow review of the test plan and to arrange for an observer to be present at the test. The performance test shall be conducted in accordance with the submitted protocol, and any changes required by EPA.

- D. Performance testing must be conducted using a representative rate of operation.
- E. Performance tests must be conducted under such conditions to ensure representative performance of the affected facility. The owner or operator must make available to EPA such records as may be necessary to determine the conditions of the performance tests.
- F. The owner or operator must provide the EPA at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the EPA the opportunity to have an observer present and/or to attend a pre-test meeting. If there is a delay in the original test date, the facility must provide at least 7 days prior notice of the rescheduled date of the performance test.
- G. The owner or operator shall provide, or cause to be provided, performance testing facilities as follows:
 - 1. Sampling ports adequate for test methods applicable to this facility,
 - 2. Safe sampling platform(s),
 - 3. Safe access to sampling platform(s), and
 - 4. Utilities for sampling and testing equipment.
- H. Unless otherwise specified, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For purposes of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply.
- I. Emissions testing, as outlined above, shall be performed every three years, or more frequently if identified above, to verify continued performance at permitted emission limits.
- J. Emission testing for the emergency engine, shall be performed every 8760 hours or three years whichever comes first to verify continued performance at permitted emission limits. The performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For purposes of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply.

VII. AGENCY NOTIFICATIONS

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

Multi Media Planning and Permitting Division
EPA Region 6
1445 Ross Avenue (6 PD-R)
Dallas, TX 75202
Email: Group R6AirPermits@EPA.gov

Permittee shall submit a copy of all compliance and enforcement correspondence as required by this Approval to Construct to:

Compliance Assurance and Enforcement Division
EPA Region 6
1445 Ross Avenue (6EN)
Dallas, TX 75202



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT



A Permit Is Hereby Issued To
South Texas Electric Cooperative, Inc.
Authorizing the Construction and Operation of
Red Gate Power Plant
Located at **Edinburg, Hidalgo County, Texas**
Latitude 29° 43' 34" Longitude 95° 8' 18"

Permit: 106544 and PSDTX1322

Issuance Date : December 20, 2013

Renewal Date: December 20, 2023


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 106544 and PSDTX1322

1. This permit authorizes construction and operation of 12 Wartsila natural gas-fired engines (Model 18V50SG), an emergency fire water pump, a black start generator, and an ammonia tank.

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 the attached table. The annual rates are based on any consecutive 12-month period. Planned startup and shutdown emissions for the sources identified on the maximum allowable emission rates table (MAERT) have been reviewed and included in the MAERT.

2. This permit does not include planned maintenance, startup, or shutdown (MSS) activities at the site, except as noted in the Maximum Allowable Emission Rates Table (MAERT). Routine maintenance and temporary maintenance facilities are authorized under Permit by Rule Title 30 Texas Administrative Code (30 TAC) §106.263. As required by 30 TAC §106.8, adequate records must be maintained at the facility to demonstrate that the requirements of the applicable PBR are consistently met.
3. All sources of air contaminants shall be physically marked in a conspicuous location with the emission point number (EPN) and/or the source name as identified on the MAERT.

Emission Standards and Operating Specifications

4. Selective Catalytic Reduction (SCR) and oxidation catalysts shall be used to achieve the emission standards in the MAERT. Emissions of nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC) and ammonia (NH₃) from EPNs ENG01 through ENG12 (ENG01-ENG12) shall comply with the following limits except during periods of startup and shutdown:

Engine Description	Air Contaminant	Emission Rate Limit
Wartsila Model 18V50SG 26,487 bhp per engine	NO _x	0.084 g/hp-hr
	CO	0.30 g/hp-hr
	VOC	0.30 g/hp-hr
	NH ₃	10 ppm

The emission rates shall be reported in units of gram per horsepower hour (g/hp-hr) for NO_x, CO, and VOC and in units of parts per million (ppm) for NH₃, as well as pounds per hour (lb/hr) for all four contaminants. The emission rate limits for NO_x, CO, VOC and NH₃ listed above, along with the hourly and annual emission rate limits referenced in the attached MAERT, represent the best available control technology and are applicable under all engine load conditions.

5. Except during MSS activities, the opacity shall not exceed five percent averaged over a six-minute period from the stacks of EPN ENG01-ENG12. During MSS activities, the

opacity shall not exceed 15 percent [or other applicable opacity limit specified in 30 TAC § 111.111(a)(1)]. Each determination shall be made by first observing for visible emissions while each facility is in operation. Observations shall be made at least 15 feet and no more than 0.25 miles from the emission point. If visible emissions are observed from an emission point, then the opacity shall be determined and documented within 24 hours for that emission point using Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Appendix A, Test Method 9. Contributions from uncombined water shall not be included in determining compliance with this condition. Observations shall be performed and recorded quarterly. If the opacity exceeds five percent during normal operations or 15 percent during MSS activities, corrective action to eliminate the source of visible emissions shall be taken promptly and documented within one week of first observation.

6. Each engine startup and shutdown time is limited to a total of less than one hour per event.
7. The black start generator (EPN GEN01) is limited to a maximum (non-emergency) hours of operation not to exceed 500 hours per year.
8. The fire water pump (EPN FP01) is limited to a maximum (non-emergency) hours of operation not to exceed 100 hours per year.

Fuel Specifications

9. Natural gas fired in all engines is limited to pipeline quality sweet natural gas containing no more than 1.0 grains/100 standard cubic feet total sulfur. The use of any other fuel will require an amendment to this permit.
10. Diesel fuel used for the emergency generator and the fire water pump is limited to ultra-low sulfur diesel containing no more than 15 ppm by weight sulfur.
11. Upon request by the Executive Director of the Texas Commission on Environmental Quality (TCEQ) or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel, or shall allow air pollution control agency representatives to obtain a sample for analysis.

Federal Applicability

12. The engines shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources (NSPS) promulgated for Stationary Spark Ignition Internal Combustion Engines in 40 CFR Part 60, Subpart JJJJ and the National Emission Standard for Hazardous Air Pollutants as regulated by 40 CFR Part 63, Subpart ZZZZ.

The diesel fire water pump and diesel generator shall comply with all applicable requirements of the EPA regulations on Standards of Performance for New Stationary Sources promulgated for Stationary Compression Ignition Internal Combustion Engines in 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ.

13. If any state or federal rule or regulation is more stringent than this permit, then the more stringent condition or limitation shall govern and be the standard by which compliance will be demonstrated.

Initial Determination of Compliance

14. Gaseous sampling ports and sampling platforms shall be incorporated into the design of exhaust stacks from EPNs ENGO1-ENG12 per specifications in "Chapter 2, Stack Sampling Facilities" of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director.
15. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. The permit holder shall perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere from EPNs ENGO1-ENG12. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Test Methods or by other equivalent methods approved by the TCEQ Regional Director.

Procedures and methods presented in 40 CFR Part 60, Subpart JJJJ may be substituted for the procedures and methods in this special condition.

- A. The TCEQ Region 15 Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:
 - (1) Date for pretest meeting.
 - (2) Date sampling will occur.
 - (3) Name of firm conducting sampling.
 - (4) Type of sampling equipment to be used.
 - (5) Method or procedure to be used in sampling.
 - (6) Procedure used to determine engine load 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 these permit special conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional

Director shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division in Austin. Test waivers and alternate or equivalent procedure proposals for NSPS testing, which must have EPA approval, shall be submitted to the EPA and copied to TCEQ Regional Director.

- B. Air contaminants and diluents from the Wartsila engines, EPNo1-EPN12, to be sampled and analyzed include (but are not limited to) NO_x, CO, NH₃ and VOC as well as oxygen concentration. Emissions shall be determined by appropriate EPA methods or other methods approved by the TCEQ Regional Director prior to sampling.
- C. During testing, emissions of NO_x, CO, NH₃ and VOC shall demonstrate compliance with the limits set in Special Condition No. 4.
- D. For test purposes only, the holder of this permit may operate the engine outside its proposed operating range during the initial performance test solely for the purpose of determining the compliance operating range of the engine. Exceedance of emission limits during initial performance testing will not be considered a violation of the permit.
- E. Sampling shall be performed within 180 days after initial startup of each engine. Additional sampling shall occur as may be required by the TCEQ or EPA. Requests for additional time to perform sampling shall be submitted to the TCEQ Region 15 Office.
- F. Within 60 days after the completion of the sampling and testing required herein, two copies of the sampling reports shall be distributed as follows:
 - (1) One copy to the EPA Region 6 Office, Dallas, Texas.
 - (2) One copy to the TCEQ Region 15 Office, Harlingen, Texas.

Continuous Determination of Compliance

- 16. In order to demonstrate that the emission limits identified on the MAERT and Special Condition No. 4 are continuously met, the holder of this permit shall perform the following:
 - A. Within six months after completion of initial stack testing, begin conducting evaluations of engine performance quarterly, based on the calendar year with at least one month between tests, by measuring the NO_x, CO, and O₂ content of the exhaust. After four consecutive acceptable quarterly tests, the engine testing schedule may be changed to semiannual, with at least four months between tests, on approval of the TCEQ Regional Director. If an engine fails a semiannual performance test, the permit holder must resume testing the engine quarterly until the TCEQ Regional Office allows semiannual testing to resume.

- B. An engine shall be subject to the testing schedule in paragraph A if it was in operation for 1,000 hours or more during the calendar quarter. During each calendar quarter, the permit holder must test at least 50% of the engines that exceed 1,000 hours of operation each. However, all engines must be tested at least once per year regardless of the hours of operation unless the engine was not operated other than for maintenance and readiness checks.
 - C. If an engine is out of operation for more than four consecutive quarters, other than for maintenance and readiness checks, the performance of the engine shall be evaluated within the first 200 operating hours after returning to service.
 - D. The use of portable analyzers specifically designed for measuring the concentration of each contaminant in parts per million by volume is acceptable for these evaluations. A hot air probe or equivalent shall be used with portable analyzers to prevent error in results due to high exhaust gas temperatures. Three sets of measurements shall be averaged to determine the concentrations. Prior to and following the measurements, the portable analyzer shall be checked for accuracy using an audit gas that conforms to the specifications in 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.2(3). The test methods in 40 CFR Part 60 Subpart JJJJ are acceptable methods. Any other method must be approved by the TCEQ Regional Director.

If the portable analyzer is capable of measuring nitric oxide and nitrogen dioxide, then these measurements shall be summed to determine the NO_x emission rate.
 - E. Emissions shall be measured and recorded in the as-found operating condition, except no compliance determination shall be established during startup, shutdown, or under breakdown conditions.
 - F. Within 14 days after catalyst cleaning or catalyst replacement, each engine involved shall have the exhaust analyzed for excess NO_x and CO emissions using installed NO_x and CO sensors or hand held instruments. Sensors and/or hand held portable analyzer instruments shall be operated and calibrated per manufacturers' instructions. Analysis and calibration results shall be recorded.
 - G. Emissions calculations based on measured concentrations and exhaust flow rate shall be used to convert the portable analyzer data to g/hp-hr and lb/hr to demonstrate compliance with the NO_x and CO emission limits in Special Condition No. 4 and the MAERT. Exhaust flow rate may be monitored directly or calculated by monitoring fuel flow during testing and using EPA Test Method 19.
17. The NH₃ concentration in each Exhaust Stack (EPNs ENGO1 through ENG12) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to the frequency listed below. Testing for NH₃ slip is only required on days when the SCR unit is in operation.
- A. The holder of this permit may install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) to measure and record the concentrations of NH₃.

As an approved alternative, the NH₃ slip may be measured using a sorbent or stain tube device specific for NH₃ measurement. The frequency of sorbent/stain tube testing shall be daily for the first 60 days after the start of operation, and after catalyst replacement. The frequency may be reduced to weekly testing if operating procedures have been developed to prevent excess amounts of ammonia from being introduced in the SCR unit and when operation of the SCR unit have been proven successful with regard to controlling NH₃ slip. Records of the operating procedures shall be recorded.

- B. If the measured ammonia slip concentration exceeds 5 ppm for a consecutive one-hour period or the average of one or more sorbent or stain tube tests in an hour, the permit holder shall begin NH₃ testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or the EPA Conditional Test Method (CTM) 27 on a quarterly basis, in addition to the weekly sorbent 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 3 ppm or less, the Phenol Nitroprusside/Indophenol/CTM 27 tests may be suspended until sorbent/stain tube testing again indicate 5 ppm NH₃ slip or greater. These results shall be recorded and used to determine compliance with Special Condition No. 4 and the MAERT.
 - 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 between the silencer and the SCR, upstream of the stack NO_x CEMS, 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.
 - D. As an approved alternative to sorbent or stain tube testing, NH₃ CEMS, or a second NO_x CEMS, the permit holder may install and operate a dual stream system of NO_x CEMS at the exit of the SCR. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS and the other exhaust stream would be routed through a NH₃ converter to convert NH₃ to NO_x and then to a second NO_x CEMS. The NH₃ slip concentration shall be calculated from the delta between the two NO_x CEMS readings (converted and unconverted).
 - E. Any other method used for measuring NH₃ slip shall require prior approval from the TCEQ Harlingen Regional Office.
18. The permit holder shall install, calibrate, maintain, and operate continuous natural gas consumption monitoring systems per the manufacture's specifications. These monitoring systems shall monitor and record the average hourly natural gas consumption of each engine (EPN ENGO1-ENG12). The systems shall be accurate to ± 5.0 percent of the unit's maximum flow. The monitoring device shall be calibrated in accordance with the manufacturer's recommendations or at least annually in the absence of manufacturer's recommendations.

Ammonia Storage

19. This permit allows for the construction of a 30,000-gallon tank and associated piping for the storage and distribution of aqueous ammonia. Storage of ammonia on-site is limited to this one tank unless authorization is obtained for more tanks.
20. The permit holder shall maintain prevention and protection measures for the NH₃ storage system. The NH₃ storage tank area will be marked and protected so as to protect the NH₃ storage area from accidents that could cause a rupture. The aqueous ammonia stored shall have a concentration of less than 20% NH₃ by weight.
21. In addition to the requirements of Special Condition Nos. 19 and 20, the permit holder shall maintain the piping and valves in NH₃ service as follows:
 - A. All operating practices and procedures relating to the handling and storage of NH₃ shall conform to the safety recommendations specified for that compound by guidelines of the American National Standards Institute and the Compressed Gas Association.
 - B. Audio, visual, and olfactory (AVO) checks for NH₃ leaks shall be made once a day.
 - C. Immediately, but no later than 24 hours upon 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.

Recordkeeping

22. The following records shall be kept at the plant for the life of the permit. All records required in this permit shall be made immediately available upon request to designated representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction.
 - A. A copy of this permit.
 - B. Permit application submitted October 19, 2012, and subsequent representations submitted to the TCEQ.
 - C. The results of the initial stack test required in Special Condition No. 15.
23. The following information shall be maintained at the plant 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. Date and description of any engine maintenance and any support equipment maintenance.
- B. Quarterly records of fuel usage and total sulfur content of both natural gas and diesel fuels used by all engines on site (EPNs ENGO1-ENG12, GENO1, and FPO1). Recordkeeping of fuel total sulfur content, for both natural gas and diesel fuel, may be satisfied by records of vendor analysis.
- C. The results of the quarterly or semiannual (as applicable) engine evaluations required in Special Condition No. 16.
- D. The results of NO_x and CO emissions analysis (related to catalyst service or replacement) as well as sensor/instrument calibration records shall be maintained to demonstrate compliance with Special Condition No. 16F.
- E. The results of the quarterly NH₃ evaluations, if required by Special Condition No. 17.
- F. Stack sampling results, or other air emissions testing that may be conducted on units authorized under this permit, after the initial stack testing.
- G. Monthly records of total power station electrical production.
- H. Quarterly records of the quantity of natural gas routed to each engine including dates and duration of time to each engine.
- I. Monthly records of the hours of operation of the black start generator (EPN GENO1) to demonstrate compliance with Special Condition No. 7.
- J. Monthly records of the hours of operation of the fire water pump engine (EPN FPO1) to demonstrate compliance with Special Condition No. 8.
- K. Records of natural gas consumption monitoring system calibration.
- L. Field records of quarterly visible emissions, and if required, opacity observations as prescribed in 40 CFR Part 60, Appendix A, Test Method 9 to demonstrate compliance with Special Condition No. 5.
- M. Daily records of AVO checks for NH₃ to demonstrate compliance with Special Condition No. 21.

Date: December 20, 2013

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 106544 and PSDTX1322

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)
ENG01-ENG12	Engines 1 through 12 (5)	NO _x	4.66	20.40
		CO	5.95	26.07
		VOC	5.95	26.07
		SO ₂	0.44	1.91
		PM	3.10	13.59
		PM ₁₀	3.10	13.59
		PM _{2.5}	3.10	13.59
		H ₂ SO ₄	0.07	0.29
		Formaldehyde (6)	0.39	1.71
		NH ₃	2.15	9.42
ENG01-ENG12	Engines 1 through 12 Startup and Shutdown (5)	NO _x	19.74	---
		CO	19.51	---
		VOC	15.54	---
		SO ₂	0.44	---
		PM	4.42	---
		PM ₁₀	4.42	---
		PM _{2.5}	4.42	---
		H ₂ SO ₄	0.07	---
		Formaldehyde (6)	0.39	---

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
GEN01	Black Start Generator (500 hrs/yr) (7)	NO _x	3.31	0.83
		CO	3.86	0.96
		VOC	1.10	0.28
		SO ₂	0.008	0.002
		PM	0.22	0.06
		PM ₁₀	0.22	0.06
		PM _{2.5}	0.22	0.06
FP01	Fire Pump Engine (100 hrs/yr) (7)	NO _x	0.83	0.04
		CO	1.00	0.05
		VOC	0.17	0.01
		SO ₂	0.31	0.02
		PM	0.07	0.004
		PM ₁₀	0.07	0.004
		PM _{2.5}	0.07	0.004
NH3FUG	Ammonia Piping Fugitives (8)	NH ₃	0.10	0.44
NGFUG	Natural Gas Piping Fugitives (8)	VOC	<0.05	0.19
ENGVENT	Engine Fuel Venting at Shutdown (5)	VOC	<0.1	<0.02

Emission Sources - Maximum Allowable Emission Rates

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- NO_x - total oxides of nitrogen
- SO₂ - sulfur dioxide
- PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
- PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
- PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
- CO - carbon monoxide
- NH₃ - ammonia
- H₂SO₄ - sulfuric acid
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) The emission rates apply per engine and not to the group as a whole.
- (6) Formaldehyde emissions are not included in the VOC emission rates listed.
- (7) Allowable emission rates include planned startup and shutdown.
- (8) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: December 20, 2013