

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO

TX LFG Energy, LP

AUTHORIZING THE OPERATION OF

Baytown LFGTE Facility
Electric Services

LOCATED AT

Chambers County, Texas

Latitude 29° 40' 29" Longitude 94° 55' 10"

Regulated Entity Number: RN102663085

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: O2574 Issuance Date: _____

For the Commission

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General Terms and Conditions

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

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

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

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

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

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

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

- C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
 - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
 - E. Emission units subject to 40 CFR Part 63, Subpart ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.1090 which incorporates the 40 CFR Part 63 Subpart by reference.
 - F. Emission units subject to 40 CFR Part 63, Subpart AAAA as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.840 which incorporates the 40 CFR Part 63 Subpart by reference.
 - G. The permit holder shall comply with the following 30 TAC Chapter 101, Subchapter H, Division 3 (Mass Emission Cap and Trade Program) Requirements:
 - (i) Title 30 TAC § 101.352 (relating to General Provisions)
 - (ii) Title 30 TAC § 101.353 (relating to Allocation of Allowances)
 - (iii) Title 30 TAC § 101.354 (relating to Allowance Deductions)
 - (iv) Title 30 TAC § 101.356 (relating to Allowance Banking and Trading)
 - (v) Title 30 TAC § 101.358 (relating to Emission Monitoring and Compliance Demonstration)
 - (vi) Title 30 TAC § 101.359 (relating to Reporting)
 - (vii) Title 30 TAC § 101.360 (relating to Level of Activity Certification)
 - (viii) The terms and conditions by which the emission limits are established to meet or exceed the cap are applicable requirements of this permit
2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

- A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
 - B. Title 30 TAC § 101.3 (relating to Circumvention)
 - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
 - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
 - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
 - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
 - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
 - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
 - I. Title 30 TAC § 101.222 (relating to Demonstrations)
 - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
- A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:
 - (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
 - (ii) Title 30 TAC § 111.111(a)(1)(E)
 - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
 - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder

shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the “Applicable Requirements Summary” attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

- (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
- (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.
- (3) Records of all observations shall be maintained.
- (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.

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. The permit holder shall adhere to the provisions in the Compliance Schedule attachment of this permit and submit certified progress reports consistent with the schedule established under 30 TAC § 122.132(e)(4)(C) and including the information specified in 30 TAC § 122.142(e)(2). Those emission units listed in the Compliance Schedule attachment shall adhere with the requirements in the Compliance Schedule attachment until operating fully in compliance with the applicable requirements.
11. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:
 - A. The permit holder shall comply with the compliance schedules and submit written notification to the TCEQ Executive Director as required in 30 TAC Chapter 117, Subchapter H, Division 1:
 - (i) For sources in the Houston-Galveston-Brazoria Nonattainment area, 30 TAC § 117.9020:
 - (1) Title 30 TAC § 117.9020(2)(A), (C), and (D)
 - (ii) For electric generating facilities in the Houston-Galveston-Brazoria Nonattainment area, 30 TAC § 117.9020(2)(B)
 - B. The permit holder shall comply with the requirements of 30 TAC § 117.354 for Final Control Plan Procedures for Attainment Demonstration Emission Specifications and 30 TAC § 117.356 for Revision of Final Control Plan.
12. Use of Emission Credits to comply with applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) Offsets for Title 30 TAC Chapter 116
 - B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:
 - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)(2)

- (ii) The emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 1
- (iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)(2)
- (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122
- (v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)

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

A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:

- (i) Title 30 TAC Chapter 115
- (ii) Title 30 TAC Chapter 117
- (iii) If applicable, offsets for Title 30 TAC Chapter 116
- (iv) Temporarily exceed state NSR permit allowables

B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:

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

Permit Location

14. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit at TX LFG Energy LP, 680 Andersen Drive, Foster Plaza 10, 5th Floor, Pittsburgh, PA 15220.

Permit Shield (30 TAC § 122.148)

15. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Permit Shield

New Source Review Authorization References

Schedules

Applicable Requirements Summary

Unit Summary 14

Applicable Requirements Summary15

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 (§ 122.144), Reporting Terms and Conditions (§ 122.145), and Compliance Certification Terms and Conditions (§ 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
GASTREAT	MISCELLANEOUS UNITS	N/A	60WWW-1	40 CFR Part 60, Subpart WWW	No changing attributes.
GASTREAT	MISCELLANEOUS UNITS	N/A	63AAAA-1	40 CFR Part 63, Subpart AAAA	No changing attributes.
GRPENGINE	SRIC ENGINES	E-1, E-2, E-3, E-4, E-5, E-6	R117-1	30 TAC Chapter 117, Subchapter B	No changing attributes.
GRPENGINE	SRIC ENGINES	E-1, E-2, E-3, E-4, E-5, E-6	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GASTREAT	CD	60WWW-1	NMOC	40 CFR Part 60, Subpart WWW	§ 60.752(b)(2)(iii)(C) § 60.752(b)(2)(iv) § 60.753(f)	Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph (b)(2)(iii) (A) or (B) of this section.	None	None	None
GASTREAT	CD	63AAAA-1	VOC	40 CFR Part 63, Subpart AAAA	§ 63.1955(a)(1) § 63.1955(b)	Comply with the requirements of 40 CFR part 60, subpart WWW.	§ 63.1960	§ 63.1980(a) § 63.1980(b)	§ 63.1980(a)
GRPENGIN E	EU	R117-1	NO _x	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(9)(B)(i) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.320(a) § 117.320(b) [G]§ 117.320(c) § 117.320(i) § 117.320(j) § 117.320(k) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(2)(C) § 117.340(p)(3)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO _x emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.320(d) [G]§ 117.320(e) § 117.320(h) § 117.320(k) [G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(a)(2)(D) § 117.340(h) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.340(p)(2)(A) § 117.340(p)(2)(B) § 117.340(p)(2)(C) § 117.345(f)(3)(A) § 117.345(f)(3)(A)(ii) § 117.8000(b) § 117.8000(c) § 117.8000(c)(1)	§ 117.320(f) § 117.345(a) § 117.345(f) § 117.345(f)(12) § 117.345(f)(3) § 117.345(f)(3)(B) § 117.345(f)(9)	§ 117.320(g) § 117.335(b) § 117.335(g) § 117.340(p)(2)(D) [G]§ 117.345(b) [G]§ 117.345(c) [G]§ 117.345(e) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)

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)
							§ 117.8000(c)(3) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8140(a) § 117.8140(a)(1) § 117.8140(a)(2) § 117.8140(a)(2)(A) [G]§ 117.8140(a)(2)(B) § 117.8140(b)		
GRPENGIN E	EU	R117-1	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(B)	CO emissions must not exceed 3.0 g/hp-hr for stationary internal combustion engines.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(a)(2)(D) § 117.340(h) § 117.345(f)(3) § 117.345(f)(3)(A) § 117.345(f)(3)(A)(ii) § 117.8000(b) § 117.8000(c) § 117.8000(c)(2) § 117.8000(c)(3) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8120 § 117.8120(2) [G]§ 117.8120(2)(A) § 117.8120(2)(B) § 117.8140(a) § 117.8140(a)(1) § 117.8140(a)(2) § 117.8140(a)(2)(A) [G]§	§ 117.345(a) § 117.345(f) § 117.345(f)(12) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) [G]§ 117.345(e) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)

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)
							117.8140(a)(2)(B) § 117.8140(b)		
GRPENGIN E	EU	63ZZZZ	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6603(a)- Table 2d.13 § 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(h) § 63.6625(j) § 63.6640(b)	For each existing non-emergency, non-black start landfill or digester gas-fired stationary RICE, located at an area source, you must comply with the requirements as specified in Table 2d.13.a-c.	§ 63.6625(j) § 63.6640(a) § 63.6640(a)- Table 6.9.a.i § 63.6640(a)- Table 6.9.a.ii § 63.6640(b)	§ 63.6625(j) § 63.6655(a) § 63.6655(a)(1) § 63.6655(d) § 63.6655(e) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6640(b) § 63.6640(e) § 63.6650(f)

Permit Shield

Permit Shield 19

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		
GASTREAT	N/A	30 TAC Chapter 115, Mun. Solid Waste Landfills	Applies to the owner/operator of the MSW landfill.
GASTREAT	N/A	40 CFR Part 60, Subpart Cc	Modifications took place after May 30, 1991.
GRPENGINE	E-1, E-2, E-3, E-4, E-5, E-6	40 CFR Part 60, Subpart JJJJ	Engines were not manufactured after July 1, 2007 nor modified or reconstructed after June 12, 2006.

New Source Review Authorization References

New Source Review Authorization References 21

New Source Review Authorization References by Emission Unit..... 22

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.

Nonattainment (NA) Permits	
NA Permit No.: N058	Issuance Date: 04/20/2015
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.: 70133	Issuance Date: 04/20/2015
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.472	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

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

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
E-1	ENGINE/GENSET NO. 1	70133, N058
E-2	ENGINE/GENSET NO. 2	70133, N058
E-3	ENGINE/GENSET NO. 3	70133, N058
E-4	ENGINE/GENSET NO. 4	70133, N058
E-5	ENGINE/GENSET NO. 5	70133, N058
E-6	ENGINE/GENSET NO. 6	70133, N058
GASTREAT	LANDFILL GAS TREATMENT SKID	70133, N058

Schedules

Compliance Schedule 24

Compliance Schedule

A. Compliance Schedule				
1. Specific Non-Compliance Situation				
Unit/Group/ Process ID. No(s).	SOP Index No.	Pollutant	Applicable Requirement	
			Citation	Text Description
Sitewide	FOP STC 6	SO ₂	116.115(c), 122.143(4), 382.085(b)	FUEL FIRED IN THE ENGINES IS LIMITED TO LFG CONTAINING NO MORE THAN 11.9 GRAINS H ₂ S AND 13.2 GRAINS TOTAL SULFUR PER 100 DRY SCF. NSR PERMIT 70133 AMENDED 04/15/2015, REVISED LIMIT TO 29.2 GRAINS TOTAL SULFUR PER 100 DRY SCF.
2. Compliance Status Assessment Method and Records Location				
Compliance Status Assessment Method			Location of Records/Documentation	
Citation	Text Description			
116.115(c), 122.143(4), 382.085(b)	Test Method ASTM D-6667, quarterly as per NSR/NA permit number 70133/NA058 Special Conditions Nos. 2 and 8C.		Fuel analysis sampling dated 10/2/2014, 10/28/2014, and 3/12/2015.	
3. Non-compliance Situation Description				
Exceeded sulfur limit in inlet landfill gas stream due to raw landfill gas constituents.				
4. Corrective Action Plan Description				
Submit Permit revision (NSR/NA permit number 70133/NA058) to raise allowable concentration of sulfur in the inlet gas stream. The permit amendment, dated April 15, 2015, increased sulfur limit of 29.2 grains total sulfur per 100 dry SCF. Work collaboratively with the Baytown Landfill to jointly engage in well-field tuning in attempt to lower the sulfur levels. Sulfur sampling will be increased in frequency from quarterly to monthly, and the results will be averaged for a more representative quarterly concentration.				
5. List of Activities/Milestones to Implement the Corrective Action Plan				
1	Monthly total sulfur sampling beginning in April, 2015. The monthly sample results will be averaged for a more representative quarterly concentration.			
2	Permit amendment application submitted June, 2013. Issued, dated April 15, 2015, with increased allowable total sulfur limits.			
3	TX LFG will evaluate if alternative corrective action solutions are necessary by June 30, 2015.			

6. Previously Submitted Compliance Plan(s)	Type of Action	Date Submitted
	NOV	2/18/2015
7. Progress Report Submission Schedule	6 MONTH INTERVALS, CORRESPON. W/ TITLE V SEMI-ANNUAL DEVIATION REPORTING TIME FRAME AND DUE DATE.	

Compliance Schedule

A. Compliance Schedule				
1. Specific Non-Compliance Situation				
Unit/Group/ Process ID. No(s).	SOP Index No.	Pollutant	Applicable Requirement	
			Citation	Text Description
GRPENGINE	FOP STC 6	SO2	116.115(c), 122.143(4), 382.085(b)	MAXIMUM ALLOWABLE EMISSION RATE (MAERT) OF SO2 PER HOUR IN E-1, E-2, E-3, E-4, E-5, E-6 IS 0.77 LB/HR.
2. Compliance Status Assessment Method and Records Location				
Compliance Status Assessment Method			Location of Records/Documentation	
Citation	Text Description			
116.115(c), 122.143(4), 382.085(b)	Performance test reference guidelines as per 40 CFR 60, Appendix A: Sampling Methods 3A, 7E, 10, and 19. Emission factors used in conjunction with fuel consumption (MMBTU) to calculate SO2 emissions per hour.		2014 Air Emissions Inventory Report via TCEQ STEERS online reporting system on 3/31/2015.	
3. Non-compliance Situation Description				
Exceeded MAERT SO2 lb/hr limit in E-1, E-2, E-3, and E-4.				
4. Corrective Action Plan Description				
Permit revision (NSR/NA permit number 70133/NA058) submitted to TCEQ to raise allowable concentration of sulfur in the inlet gas stream. The permit amendment, dated April 15, 2015, has an increased SO2 lb/hr limit of 1.71 lb/hr. Furthermore, working collaboratively with the Baytown Landfill to jointly engage in well-field tuning in attempt to lower the inlet sulfur levels.				
5. List of Activities/Milestones to Implement the Corrective Action Plan				
1	Permit amendment application submitted June, 2013. Issued, dated April 15, 2015, with increased SO2 lb/hr limits for E-1, E-2, E-3, E-4, E-5, E-6.			
2	TX LFG will evaluate if alternative corrective action solutions are necessary by June 30, 2015.			
6. Previously Submitted Compliance Plan(s)		Type of Action		Date Submitted
N/A				
7. Progress Report Submission Schedule		6 MONTH INTERVALS, CORRESPON. W/ TITLE V SEMI-ANNUAL DEVIATION REPORTING TIME FRAME AND DUE DATE.		

Compliance Schedule

A. Compliance Schedule				
1. Specific Non-Compliance Situation				
Unit/Group/ Process ID. No(s).	SOP Index No.	Pollutant	Applicable Requirement	
			Citation	Text Description
GRPENGINE	FOP STC 6	SO2	116.115(c), 122.143(4), 382.085(b)	MAXIMUM ALLOWABLE EMISSION RATE (MAERT) OF SO2 TONS PER YEAR (TPY) IN E-1, E-2, E-3, E-4, E-5, E-6 IS 22.41 TPY.
2. Compliance Status Assessment Method and Records Location				
Compliance Status Assessment Method			Location of Records/Documentation	
Citation	Text Description			
116.115(c), 122.143(4), 382.085(b)	Performance test reference guidelines as per 40 CFR 60, Appendix A: Sampling Methods 3A, 7E, 10, and 19. Emission factors used in conjunction with fuel consumption (MMBTU) to calculate SO2 emissions in tons per year.		2014 Air Emissions Inventory Report via TCEQ STEERS online reporting system on 3/31/2015.	
3. Non-compliance Situation Description				
Exceeded MAERT SO2 tpy limit for the LFGTE Facility.				
4. Corrective Action Plan Description				
Permit revision (NSR/NA permit number 70133/NA058) submitted to TCEQ to raise allowable concentration of sulfur in the inlet gas stream. The permit amendment, dated April 15, 2015, has an increased SO2 tpy limit of 42.69 lb/hr. Furthermore, working collaboratively with the Baytown Landfill to jointly engage in well-field tuning in attempt to lower the inlet sulfur levels.				
5. List of Activities/Milestones to Implement the Corrective Action Plan				
1	Permit amendment application submitted June, 2013. Issued, dated April 15, 2015, with an increased SO2 tpy limit for the LFGTE Facility.			
2	TX LFG will evaluate if alternative corrective action solutions are necessary by June 30, 2015.			
6. Previously Submitted Compliance Plan(s)		Type of Action		Date Submitted
N/A				
7. Progress Report Submission Schedule		6 MONTH INTERVALS, CORRESPON. W/ TITLE V SEMI-ANNUAL DEVIATION REPORTING TIME FRAME AND DUE DATE.		

Appendix A

Acronym List 29

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
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 Table31

Major NSR Summary Table

Permit Number: 70133; Federal Permit: N058			Issuance Date: 04/15/2015 Amendment, 04/20/2015 Renewal				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
E-1	Engine/Genset No. 1	NOx	1.77	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		VOC	0.46	-	SC 6	SC 6, SC 7	SC 8
		CO	8.57	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		SO ₂	1.71	-	-	SC 7	SC 8
		HCl	0.08	-	-	SC 7	SC 8
		PM ₁₀	0.49	-	-	SC 7	SC 8
		PM _{2.5}	0.49	-	-	SC 7	SC 8
E-2	Engine/Genset No. 2	NOx	1.77	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		VOC	0.46	-	SC 6	SC 6, SC 7	SC 8
		CO	8.57	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		SO ₂	1.71	-	-	SC 7	SC 8
		HCl	0.08	-	-	SC 7	SC 8
		PM ₁₀	0.49	-	-	SC 7	SC 8
		PM _{2.5}	0.49	-	-	SC 7	SC 8
E-3	Engine/Genset No. 3	NOx	1.77	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		VOC	0.46	-	SC 6	SC 6, SC 7	SC 8
		CO	8.57	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		SO ₂	1.71	-	-	SC 7	SC 8
		HCl	0.08	-	-	SC 7	SC 8

Permit Number: 70133; Federal Permit: N058				Issuance Date: 04/15/2015 Amendment, 04/20/2015 Renewal			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		PM ₁₀	0.49	-	-	SC 7	SC 8
		PM _{2.5}	0.49	-	-	SC 7	SC 8
E-4	Engine/Genset No. 4	NO _x	1.77	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		VOC	0.46	-	SC 6	SC 6, SC 7	SC 8
		CO	8.57	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		SO ₂	1.71	-	-	SC 7	SC 8
		HCl	0.08	-	-	SC 7	SC 8
		PM ₁₀	0.49	-	-	SC 7	SC 8
		PM _{2.5}	0.49	-	-	SC 7	SC 8
E-5	Engine/Genset No. 5	NO _x	1.77	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		VOC	0.46	-	SC 6	SC 6, SC 7	SC 8
		CO	8.57	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		SO ₂	1.71	-	-	SC 7	SC 8
		HCl	0.08	-	-	SC 7	SC 8
		PM ₁₀	0.49	-	-	SC 7	SC 8
		PM _{2.5}	0.49	-	-	SC 7	SC 8
E-6	Engine/Genset No. 6	NO _x	1.77	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		VOC	0.46	-	SC 6	SC 6, SC 7	SC 8
		CO	8.57	-	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		SO ₂	1.71	-	-	SC 7	SC 8
		HCl	0.08	-	-	SC 7	SC 8
		PM ₁₀	0.49	-	-	SC 7	SC 8
		PM _{2.5}	0.49	-	-	SC 7	SC 8

Permit Number: 70133; Federal Permit: N058				Issuance Date: 04/15/2015 Amendment, 04/20/2015 Renewal			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
E-1 thru E-6	LFGTE Facility	NOx	-	44.18	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		VOC	-	11.46	SC 6	SC 6, SC 7	SC 8
		CO	-	213.98	SC 5, SC 6	SC 5, SC 6, SC 7	SC 5, SC 8
		SO ₂	-	42.69	-	SC 7	SC 8
		HCl	-	2.00	-	SC 7	SC 8
		PM ₁₀	-	12.26	-	SC 7	SC 8
		PM _{2.5}	-	12.26	-	SC 7	SC 8

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 of 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

PM₁₀ – total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented

PM_{2.5} – total particulate matter equal to or less than 2.5 microns in diameter

CO – carbon monoxide

HCl – hydrogen chloride

(4) Emission associated with maintenance, startup, and shutdown are evacuated to a landfill flare, which is owned and operated by the landfill owner.

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



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT



A Permit Is Hereby Issued To
TX LFG ENERGY, LP
Authorizing the Continued Operation of
Baytown LFGTE Facility
Located at **Baytown, Chambers County, Texas**
Latitude 29° 40' 29" Longitude -94° 55' 10"

Permits: 70133 and N058

Issuance Date : April 20, 2015

Expiration Date: April 20, 2025

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 70133 and N058

Emission Limits, Fuel Specifications, and Work Practices

1. This permit covers the installation and operation of six Jenbacher, Model JGS 320 GS-L.L, 1,341 brake-horsepower (bHP) landfill gas-fired engines for the generation up to a total of 6.8 megawatts of (nominal rating) electricity.
2. Fuel fired in the engines is limited to landfill gas containing no more than 29.2 grains total sulfur per 100 dry standard cubic feet. The use of any other fuel will require an amendment to this permit. **(04/15)**
3. Emission rates of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from the Engines (Emission Point Nos. E-1, E-2, E-3, E-4, E-5, and E-6) engine shall be reported in brake specific units of gram per horsepower-hour (g/hp-hr) and in units of pounds per hour and are limited as follows: **(04/15)**

Emission Unit	Air Contaminant	Emission Rate Limit
Jenbacher, JGS 320 GS-L.L, 1,341 bHP	NO _x	0.6 g/hp-hr
	CO	2.9 g/hp-hr
	VOC	0.28 g/hp-hr

The g/hp-hr limits for NO_x and VOC listed above, along with the hourly and annual emission rate limits referenced in attached maximum allowable emission rates table (MAERT), represent the lowest achievable emission rate and are applicable under all engine load conditions. The g/hp-hr limits for CO listed above, along with the hourly and annual emission rate limits referenced in attached MAERT, represent the best available control technology and are applicable under all engine load conditions.

4. Opacity of emissions from the facility shall not exceed 5 percent averaged over a six-minute period, except for those periods described in Title 30 Texas Administrative Code §§ 101.201 and 101.211 (30 TAC §§ 101.201 and 101.211). The opacity shall be determined by the U.S. Environmental Protection Agency (EPA) Reference Method 9.

Initial Determination of Compliance

5. The holder of this permit shall perform stack testing to establish the actual pattern and quantities of air contaminants being emitted from one of the engines. The holder of this permit shall provide test facilities and conduct test operations at their expense.

Gaseous sampling ports and sampling platforms shall be incorporated into the design of the engine stack per specifications in the attachment entitled "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

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

The notice shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.
- (6) Method or procedure used to determine engine load.

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

A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in Section B of this condition shall be submitted to the TCEQ Austin Office of Permitting, Remediation, and Registration, Air Permits Division.

- B. Air contaminants emitted from the engine to be tested for include (but are not limited to) NO_x, CO, and oxygen (O₂). The VOC shall be tested in accordance with Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Subpart WWW - Standards of Performance for Municipal Waste Landfills. Emissions shall be determined by appropriate EPA Methods or other methods approved by the TCEQ Houston Regional Director.
- C. Emissions of NO_x and CO shall be sampled at three points in the normal operating range including the upper and lower ends of full engine load range. For each test, the following engine operating parameters shall be clearly described in the sampling report: air-fuel ratio, exhaust O₂ content, percent water in the exhaust, engine speed, and horsepower.

- 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 90 days after initial start-up of the engine and at such other times as required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ Houston Regional Office.
- F. Two copies of the final sampling report shall be forwarded to the TCEQ within 45 days after sampling is completed. Sampling reports shall comply with the attached conditions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Houston Regional Office.

One copy to the TCEQ Austin Office, Air Permits Division.

Continuous Determination of Compliance

- 6. In order to demonstrate that emission limits specified in Special Condition No. 3 and the MAERT are continuously met, the holder of this permit shall perform the following:
 - A. Conduct evaluations of engine performance every three months (quarterly) at full engine load and speed by measuring the NO_x, CO, and O₂ content of the exhaust. The VOC shall be monitored as Non-Methane Organic Compound in accordance with the requirements of 40 CFR Part 60, Subpart WWW, Standards of Performance for Municipal Waste Landfills.
 - B. 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, § 5.1.2(3). Any other method approved by the TCEQ Houston Regional Director or the TCEQ Compliance Support Division is also acceptable.

- C. Emissions shall be measured and recorded in the as-found operating condition, except no compliance determination shall be established during start-up, shutdown, or under breakdown conditions.

Recordkeeping

- 7. The following written records shall be made and maintained by the holder of this permit on a five-year rolling retention basis and shall be made immediately available upon request to designated representatives of the TCEQ, the EPA, or any local air pollution control program having jurisdiction.
 - A. The results of all stack tests required in Special Condition Nos. 5 and 6. A copy of all reports required by Special Condition No. 8 shall be permanently kept on file.
 - B. Date and description of any engine maintenance.
 - C. Quarterly records of fuel usage and total sulfur content. **(04/15)**

Reporting

- 8. The holder of this permit shall submit to the TCEQ Houston Regional Office and the TCEQ Office of Air in Austin, quarterly reports, no later than 45 days of the end of the quarter, containing the following:
 - A. Results of quarterly tests required in Special Condition No. 6.
 - B. In addition to requirements under 30 TAC §§ 101.210 and 101.211 a summary of the periods of emission limit exceedance.
 - C. When no excess emissions or air pollution control equipment failures or adjustments have occurred, such information shall be stated in the report.

Dated: April 15, 2015

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 70133 and N058

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 (4)	
			lbs/hour	TPY(5)
E-1	Engine/Genset No. 1	NO _x	1.77	-
		VOC	0.46	-
		CO	8.57	-
		SO ₂	1.71	-
		HCl	0.08	-
		PM ₁₀	0.49	-
		PM _{2.5}	0.49	-
E-2	Engine/Genset No. 2	NO _x	1.77	-
		VOC	0.46	-
		CO	8.57	-
		SO ₂	1.71	-
		HCl	0.08	-
		PM ₁₀	0.49	-
		PM _{2.5}	0.49	-
E-3	Engine/Genset No. 3	NO _x	1.77	-
		VOC	0.46	-
		CO	8.57	-
		SO ₂	1.71	-
		HCl	0.08	-
		PM ₁₀	0.49	-
		PM _{2.5}	0.49	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)	
			lbs/hour	TPY(5)
E-4	Engine/Genset No. 4	NO _x	1.77	-
		VOC	0.46	-
		CO	8.57	-
		SO ₂	1.71	-
		HCl	0.08	-
		PM ₁₀	0.49	-
		PM _{2.5}	0.49	-
E-5	Engine/Genset No. 5	NO _x	1.77	-
		VOC	0.46	-
		CO	8.57	-
		SO ₂	1.71	-
		HCl	0.08	-
		PM ₁₀	0.49	-
		PM _{2.5}	0.49	-
E-6	Engine/Genset No. 6	NO _x	1.77	-
		VOC	0.46	-
		CO	8.57	-
		SO ₂	1.71	-
		HCl	0.08	-
		PM ₁₀	0.49	-
		PM _{2.5}	0.49	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)	
			lbs/hour	TPY(5)
E-1 thru E-6	LFGTE Facility	NO _x	-	44.18
		VOC	-	11.46
		CO	-	213.98
		SO ₂	-	42.69
		HCl	-	2.00
		PM ₁₀	-	12.26
		PM _{2.5}	-	12.26

- (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
 PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
 PM_{2.5} - total particulate matter equal to or less than 2.5 microns in diameter
 CO - carbon monoxide
 HCl -hydrogen chloride
- (4) Emissions associated with maintenance, startup, and shutdown are evacuated to a landfill flare, which is owned and operated by the landfill operator.
- (5) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.

Date: April 15, 2015