

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Freeport LNG Development, L.P.

AUTHORIZING THE OPERATION OF
Freeport LNG Regas Facility and Liquefaction Plant
Natural Gas Distribution

LOCATED AT
Brazoria County, Texas
Latitude 28° 55' 37" Longitude 95° 19' 3"
Regulated Entity Number: RN103196689

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: O2878 Issuance Date: April 30, 2025

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. For the purpose of generating emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 1 (Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:
 - (i) Title 30 TAC § 101.302 (relating to General Provisions)
 - (ii) Title 30 TAC § 101.303 (relating to Emission Reduction Credit Generation Certification)
 - (iii) Title 30 TAC § 101.304 (relating to Mobile Emission Reduction Credit Generation and Certification)
 - (iv) Title 30 TAC § 101.309 (relating to Emission Credit Banking and Trading)
 - (v) The terms and conditions by which the emission limits are established to generate the reduction credit are applicable requirements of this permit
- 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 § 101.359 (relating to Reporting)
 - (vi) Title 30 TAC § 101.360 (relating to Level of Activity Certification)
 - (vii) The terms and conditions by which the emission limits are established to meet or exceed the cap are applicable requirements of this permit
- H. For the purpose of generating discrete emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 4 (Discrete Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:
 - (i) Title 30 TAC § 101.372 (relating to General Provisions)
 - (ii) Title 30 TAC § 101.373 (relating to Discrete Emission Reduction Credit Generation and Certification)
 - (iii) Title 30 TAC § 101.374 (relating to Mobile Discrete Emission Reduction Credit Generation and Certification)
 - (iv) Title 30 TAC § 101.378 (relating to Discrete Emission Credit Banking and Trading)

- (v) The terms and conditions by which the emission limits are established to generate the discrete reduction credit 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. 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.
- C. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).
- D. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
 - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
 - (ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)
 - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)
- 4. For storage vessels maintaining working pressure as specified in 30 TAC Chapter 115, Subchapter B, Division 1: Storage of Volatile Organic Compounds, the permit holder shall comply with the requirements of 30 TAC § 115.112(e)(1).
- 5. Permit holder shall comply with the following 30 TAC Chapter 115, Subchapter C requirements:
 - A. When filling stationary gasoline storage vessels (Stage I) for motor vehicle fuel dispensing facilities specified in 30 TAC Chapter 115, Subchapter C, the permit holder shall comply with the following requirements:
 - (i) Title 30 TAC § 115.221 (relating to Emission Specifications)
 - (ii) Title 30 TAC § 115.222 (relating to Control Requirements)
 - (iii) Title 30 TAC § 115.223 (relating to Alternate Control Requirements)
 - (iv) Title 30 TAC § 115.224 (relating to Inspection Requirements)
 - (v) Title 30 TAC § 115.225 (relating to Testing Requirements)

- (vi) Title 30 TAC § 115.226 (relating to Recordkeeping Requirements)
- 6. The permit holder shall comply with the requirements of 30 TAC § 115.726(e)(3)(A) for vent streams having no potential to emit HRVOC.
- 7. The permit holder shall comply with the requirements of 30 TAC § 115.726(e)(3)(A) for vent streams from sources exempt under 30 TAC § 115.727(c)(3).
- 8. 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)
- 9. 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.
- 10. For each gasoline dispensing facility, with a throughput of less than 10,000 gallons per month as specified in 40 CFR Part 63, Subpart CCCCCC, the permit holder shall comply with the following requirements (Title 30 TAC, Subchapter C, § 113.1380 incorporated by reference):
 - A. Title 40 CFR § 63.11111(e), for records of monthly throughput
 - B. Title 40 CFR § 63.11111(i), for compliance due to increase of throughput
 - C. Title 40 CFR § 63.11111(j), for dispensing from fixed tank into portable tank for on-site delivery
 - D. Title 40 CFR § 63.11113(c), for compliance due to increase of throughput
 - E. Title 40 CFR § 63.11115(a), for operation of the source
 - F. Title 40 CFR § 63.11116(a) and (a)(1) - (4), for work practices
 - G. Title 40 CFR § 63.11116(b), for records availability
 - H. Title 40 CFR § 63.11116(d), for portable gasoline containers

Additional Monitoring Requirements

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

New Source Review Authorization Requirements

12. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule (including the terms, conditions, monitoring, recordkeeping, and reporting identified in registered PBRs and permits by rule identified in the PBR Supplemental Tables dated January 13, 2025 in the application for project 36237), 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
13. 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.
14. 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

15. 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.

16. 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)
 - 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.
17. Use of Emission Credits to comply with applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) Offsets for Title 30 TAC Chapter 116
 - B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:
 - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)-(d)
 - (ii) The emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 1
 - (iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)-(d)
 - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122
 - (v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)
18. Use of Discrete Emission Credits to comply with the applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115

- (ii) Title 30 TAC Chapter 117
 - (iii) If applicable, offsets for Title 30 TAC Chapter 116
 - (iv) Temporarily exceed state NSR permit allowables
- B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:
- (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
 - (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
 - (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)
 - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122
 - (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Protection of Stratospheric Ozone

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

Alternative Requirements

20. The permit holder shall comply with the approved alternative means of control (AMOC); alternative monitoring, recordkeeping, or reporting requirements; or requirements determined to be equivalent to an otherwise applicable requirement contained in the Alternative Requirements attachment of this permit. Units complying with an approved alternative requirement have reference to the approval in the Applicable Requirements summary listing for the unit. The permit holder shall maintain the original documentation, from the TCEQ Executive Director, demonstrating the method or limitation utilized. Documentation shall be maintained and made available in accordance with 30 TAC § 122.144.

Permit Location

21. 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)

22. 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

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Alternative Requirement

Applicable Requirements Summary

Unit Summary 13

Applicable Requirements Summary 17

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
CUBE-GAS	LOADING/UNLOADING OPERATIONS	N/A	R5211-GAS	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
EG-1	SRIC ENGINES	N/A	R7310-ENGINE	30 TAC Chapter 117, Subchapter B	No changing attributes.
EG-1	SRIC ENGINES	N/A	60IIII-ENGINE	40 CFR Part 60, Subpart IIII	No changing attributes.
EG-1	SRIC ENGINES	N/A	63ZZZZ-ENGINE	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
ETHCOMP	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	115H-FLARE	30 TAC Chapter 115, HRVOC Vent Gas	No changing attributes.
FLR	FLARES	N/A	R1111-FLRBOG	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FWP2	SRIC ENGINES	N/A	R7310-ENGINE	30 TAC Chapter 117, Subchapter B	No changing attributes.
FWP2	SRIC ENGINES	N/A	60IIII-FWP2	40 CFR Part 60, Subpart IIII	No changing attributes.
FWP2	SRIC ENGINES	N/A	63ZZZZ-ENGINE	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-DIESEL	LOADING/UNLOADING OPERATIONS	CUBE-DIES, EG-1TK, EG-ADMINTK, EG-DOCKTK, FWPTK, JAM-DIES, LEACT-1, LEACT-2, LEGT-1, LEGT-2, LEGT-3, LEGT-4, LEGT-5, LEGT-6, LEGT-7, LFWPT-1, LFWPT-2, LFWPT-3, Z-10TK, Z-210TK	R5211-DIESELTK	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
GRP-ENGINE	SRIC ENGINES	EG-ADMIN, EG-DOCK	R7310-ENGINE	30 TAC Chapter 117, Subchapter B	No changing attributes.
GRP-ENGINE	SRIC ENGINES	EG-ADMIN, EG-DOCK	60III-ENGINE	40 CFR Part 60, Subpart IIII	No changing attributes.
GRP-ENGINE	SRIC ENGINES	EG-ADMIN, EG-DOCK	63ZZZZ-ENGINE	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-ETH	LOADING/UNLOADING OPERATIONS	17V-54A, 17V-54B	R115C-ETH	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
GRP-LIQEAC	SRIC ENGINES	LIQEAC-1, LIQEAC-2	R7310-ENGINE	30 TAC Chapter 117, Subchapter B	No changing attributes.
GRP-LIQEAC	SRIC ENGINES	LIQEAC-1, LIQEAC-2	60III-LIQEAC	40 CFR Part 60, Subpart IIII	No changing attributes.
GRP-LIQEAC	SRIC ENGINES	LIQEAC-1, LIQEAC-2	63ZZZZ-ENGINE	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-LIQFLR	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	LIQFLAREMSS, LIQFLR-MCH, LIQFLR-PRO, LIQFLR-PSV, LIQFLR-TUR	115B-FLR	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
GRP-LIQFWP	SRIC ENGINES	LIQFWP-1, LIQFWP-2, LIQFWP-3	R7310-ENGINE	30 TAC Chapter 117, Subchapter B	No changing attributes.
GRP-LIQFWP	SRIC ENGINES	LIQFWP-1, LIQFWP-2, LIQFWP-3	60III-LIQFWP	40 CFR Part 60, Subpart IIII	No changing attributes.
GRP-LIQFWP	SRIC ENGINES	LIQFWP-1, LIQFWP-2, LIQFWP-3	63ZZZZ-ENGINE	40 CFR Part 63, Subpart ZZZZ	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
GRP-LIQLEG	SRIC ENGINES	LIQEG-1, LIQEG-2, LIQEG-3, LIQEG-4, LIQEG-7	R7310-ENGINE	30 TAC Chapter 117, Subchapter B	No changing attributes.
GRP-LIQLEG	SRIC ENGINES	LIQEG-1, LIQEG-2, LIQEG-3, LIQEG-4, LIQEG-7	60III-LIQLEG	40 CFR Part 60, Subpart III	No changing attributes.
GRP-LIQLEG	SRIC ENGINES	LIQEG-1, LIQEG-2, LIQEG-3, LIQEG-4, LIQEG-7	63ZZZZ-ENGINE	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-LIQSEG	SRIC ENGINES	LIQEG-5, LIQEG-6	R7310-ENGINE	30 TAC Chapter 117, Subchapter B	No changing attributes.
GRP-LIQSEG	SRIC ENGINES	LIQEG-5, LIQEG-6	60III-LIQSEG	40 CFR Part 60, Subpart III	No changing attributes.
GRP-LIQSEG	SRIC ENGINES	LIQEG-5, LIQEG-6	63ZZZZ-LIQSEG	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-LUBOIL	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	11K-30, 11K-31, 11K-32/11K-33, 12K-30, 12K-31, 12K-32/12K-33, 13K-30, 13K-31, 13K-32/13K-33, 14K-30, 14K-31, 14K-32/14K-33	115B-LUBEOIL	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
GRP-MARINE	LOADING/UNLOADING OPERATIONS	P1-DOCK, P2- DOCK	R5211-MARINE1	30 TAC Chapter 115, Loading and Unloading of VOC	Transfer Type = Only unloading.
GRP-MARINE	LOADING/UNLOADING OPERATIONS	P1-DOCK, P2- DOCK	R5211-MARINE2	30 TAC Chapter 115, Loading and Unloading of VOC	Transfer Type = Only loading.
GRP-PRO	LOADING/UNLOADING OPERATIONS	17V-53A, 17V-53B	R115C-PRO	30 TAC Chapter 115, Loading and Unloading of	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
				VOC	
LIQFLARE	FLARES	N/A	R1111-LIQFLR	30 TAC Chapter 111, Visible Emissions	No changing attributes.
LIQFLARE	FLARES	N/A	115H-LIQFLR	30 TAC Chapter 115, HRVOC Vent Gas	No changing attributes.
LIQFLARE	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	115B-LIQFLR	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
Z-10	SRIC ENGINES	N/A	R7310-ENGINE	30 TAC Chapter 117, Subchapter B	No changing attributes.
Z-10	SRIC ENGINES	N/A	60IIII-ENGINE	40 CFR Part 60, Subpart IIII	No changing attributes.
Z-10	SRIC ENGINES	N/A	63ZZZZ-ENGINE	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
Z-210	SRIC ENGINES	N/A	R7310-ENGINE	30 TAC Chapter 117, Subchapter B	No changing attributes.
Z-210	SRIC ENGINES	N/A	60IIII-Z210	40 CFR Part 60, Subpart IIII	No changing attributes.
Z-210	SRIC ENGINES	N/A	63ZZZZ-Z210	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)
CUBE-GAS	EU	R5211-GAS	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(2)(A) § 115.212(a)(2) [G]§ 115.212(a)(7) § 115.214(a)(1)(B) § 115.214(a)(1)(D) § 115.214(a)(1)(D)(i)	Any plant, excluding gasoline bulk plants, which loads less than 20,000 gpd of VOC with a true vapor pressure of 0.5 psia or greater is exempt from the requirements of this division, except for the specified requirements.	§ 115.214(a)(1)(A) § 115.214(a)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B) § 115.216(3)(D)	None
EG-1	EU	R7310-ENGINE	Exempt	30 TAC Chapter 117, Subchapter B	[G]§ 117.303(a)(11) [G]§ 117.310(f)	Units exempted from the provisions of this division except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1) and 117.354(a)(5) include new, modified, reconstructed, or relocated stationary diesel engine placed into service on or after October 1, 2001, that operates less than 100 hours per year, based on a rolling 12-month average, in other than emergency situations; and meets the requirements for non-road engines as specified. §117.303(a)(11)(A)-(B)	None	§ 117.340(j) § 117.345(f) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None
EG-1	EU	60III-ENGINE	CO	40 CFR Part 60, Subpart III	§ 60.4205(a)-Table 1 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must comply with a CO emission	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						limit of 11.4 g/KW-hr, as listed in Table 1 to this subpart.			
EG-1	EU	60IIII-ENGINE	Hydrocarbons	40 CFR Part 60, Subpart IIII	§ 60.4205(a)-Table 1 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must comply with an HC emission limit of 1.3 g/KW-hr, as listed in Table 1 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
EG-1	EU	60IIII-ENGINE	NO _x	40 CFR Part 60, Subpart IIII	§ 60.4205(a)-Table 1 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 37 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must comply with a NO _x emission limit of 9.2 g/KW-hr, as listed in Table 1 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
EG-1	EU	60IIII-ENGINE	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(a)-Table 1 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						comply with a PM emission limit of 0.54 g/KW-hr, as listed in Table 1 to this subpart.			
EG-1	EU	63ZZZZ-ENGINE	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
ETHCOMP	EP	115H-FLARE	Highly Reactive VOC	30 TAC Chapter 115, HRVOC Vent Gas	§ 115.727(f) § 115.725(n) **See Alternative Requirement	All sites that are subject to this division and that are located in the Houston/Galveston/ Brazoria area as defined in §115.10 of this title (relating to Definitions), excluding Harris County, are exempt from § 115.722(b) and (c)(2) of this title, except as provided in § 115.729(a)(3) of this title (relating to Counties and Compliance Schedules).	**See Alternative Requirement	§ 115.726(i) § 115.726(j)(1) § 115.726(j)(2) **See Alternative Requirement	§ 115.725(n) **See Alternative Requirement
FLR	EU	R1111-FLRBOG	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than	§ 111.111(a)(4)(A)(i)	§ 111.111(a)(4)(A)(ii)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						five minutes in any two-hour period. Non-excessive upset events are subject to the provisions under §101.222(b).	111.111(a)(4)(A)(ii)		
FWP2	EU	R7310-ENGINE	Exempt	30 TAC Chapter 117, Subchapter B	[G]§ 117.303(a)(11) [G]§ 117.310(f)	Units exempted from the provisions of this division except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1) and 117.354(a)(5) include new, modified, reconstructed, or relocated stationary diesel engine placed into service on or after October 1, 2001, that operates less than 100 hours per year, based on a rolling 12-month average, in other than emergency situations; and meets the requirements for non-road engines as specified. §117.303(a)(11)(A)-(B)	None	§ 117.340(j) § 117.345(f) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None
FWP2	EU	60III-FWP2	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)	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 130 KW and less than or equal to 560 KW and a displacement of less than 30 liters per cylinder and is a 2009 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.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
FWP2	EU	60III-FWP2	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 130 KW and less than or equal to 560 KW and a displacement of less than 30 liters per cylinder and is a 2009 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as listed in Table 4 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
FWP2	EU	63ZZZ-ENGINE	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
GRP-DIESEL	EU	R5211-DIESELTK	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(1) § 115.212(a)(2) § 115.214(a)(1)(B) § 115.214(a)(1)(D) § 115.214(a)(1)(D)(i)	Vapor pressure (at land-based operations). All land-based loading and unloading of VOC with a true vapor pressure less than 0.5 psia is exempt from the requirements of this	§ 115.214(a)(1)(A) § 115.214(a)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None

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)
						division, except as specified.			
GRP-ENGINE	EU	R7310-ENGINE	Exempt	30 TAC Chapter 117, Subchapter B	[G]§ 117.303(a)(11) [G]§ 117.310(f)	Units exempted from the provisions of this division except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1) and 117.354(a)(5) include new, modified, reconstructed, or relocated stationary diesel engine placed into service on or after October 1, 2001, that operates less than 100 hours per year, based on a rolling 12-month average, in other than emergency situations; and meets the requirements for non-road engines as specified. §117.303(a)(11)(A)-(B)	None	§ 117.340(j) § 117.345(f) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None
GRP-ENGINE	EU	60III-ENGINE	CO	40 CFR Part 60, Subpart IIII	§ 60.4205(a)-Table 1 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must comply with a CO emission limit of 11.4 g/KW-hr, as listed in Table 1 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRP-ENGINE	EU	60III-ENGINE	Hydrocarbons	40 CFR Part 60, Subpart IIII	§ 60.4205(a)-Table 1 § 60.4206 § 60.4207(b)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	engine power greater than or equal to 130 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must comply with an HC emission limit of 1.3 g/KW-hr, as listed in Table 1 to this subpart.			
GRP-ENGINE	EU	60III-ENGINE	NO _x	40 CFR Part 60, Subpart IIII	§ 60.4205(a)-Table 1 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 37 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must comply with a NO _x emission limit of 9.2 g/KW-hr, as listed in Table 1 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRP-ENGINE	EU	60III-ENGINE	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(a)-Table 1 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must comply with a PM emission limit of 0.54 g/KW-hr, as listed in Table 1 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRP-ENGINE	EU	63ZZZZ-ENGINE	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	None	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						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.			
GRP-ETH	EU	R115C-ETH	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(2)(A) § 115.212(a)(2) [G]§ 115.212(a)(7) § 115.214(a)(1)(B) § 115.214(a)(1)(D) § 115.214(a)(1)(D)(i)	Any plant, excluding gasoline bulk plants, which loads less than 20,000 gpd of VOC with a true vapor pressure of 0.5 psia or greater is exempt from the requirements of this division, except for the specified requirements.	§ 115.214(a)(1)(A) § 115.214(a)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B) § 115.216(3)(D)	None
GRP-LIQEAC	EU	R7310-ENGINE	Exempt	30 TAC Chapter 117, Subchapter B	[G]§ 117.303(a)(11) [G]§ 117.310(f)	Units exempted from the provisions of this division except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1) and 117.354(a)(5) include new, modified, reconstructed, or relocated stationary diesel engine placed into service on or after October 1, 2001, that operates less than 100 hours per year, based on a rolling 12-month average, in other than emergency	None	§ 117.340(j) § 117.345(f) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						situations; and meets the requirements for non-road engines as specified. §117.303(a)(11)(A)-(B)			
GRP-LIQEAC	EU	60III-LIQEAC	CO	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a CO emission limit of 3.5 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRP-LIQEAC	EU	60III-LIQEAC	NMHC and NO _x	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 75 KW and less than or equal to 560 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with an NMHC+NO _x emission limit of 4.0 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRP-LIQEAC	EU	60III-LIQEAC	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2)	Owners and operators of emergency stationary CI ICE, that are not fire pump	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.			
GRP-LIQEAC	EU	63ZZZZ-ENGINE	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
GRP-LIQFLR	EP	115B-FLR	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.123(a)(1) § 115.910 **See Alternative Requirement	Alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division may be approved by the Executive Director in	[G]§ 115.125 § 115.126(2) **See Periodic Monitoring Summary **See Alternative Requirement	§ 115.126 § 115.126(2) **See Alternative Requirement	**See Alternative Requirement

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)
						accordance with §115.910 of this title if emission reduction are demonstrated to be substantially equivalent.			
GRP-LIQFWP	EU	R7310-ENGINE	Exempt	30 TAC Chapter 117, Subchapter B	[G]§ 117.303(a)(11) [G]§ 117.310(f)	Units exempted from the provisions of this division except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1) and 117.354(a)(5) include new, modified, reconstructed, or relocated stationary diesel engine placed into service on or after October 1, 2001, that operates less than 100 hours per year, based on a rolling 12-month average, in other than emergency situations; and meets the requirements for non-road engines as specified. §117.303(a)(11)(A)-(B)	None	§ 117.340(j) § 117.345(f) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None
GRP-LIQFWP	EU	60III-LIQFWP	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)	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 130 KW and less than or equal to 560 KW and a displacement of less than 30 liters per cylinder and is a 2009 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.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRP-LIQFWP	EU	60III-LIQFWP	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 130 KW and less than or equal to 560 KW and a displacement of less than 30 liters per cylinder and is a 2009 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as listed in Table 4 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRP-LIQFWP	EU	63ZZZZ-ENGINE	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
GRP-LIQLEG	EU	R7310-ENGINE	Exempt	30 TAC Chapter 117, Subchapter B	[G]§ 117.303(a)(11) [G]§ 117.310(f)	Units exempted from the provisions of this division except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1) and 117.354(a)(5) include new,	None	§ 117.340(j) § 117.345(f) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						modified, reconstructed, or relocated stationary diesel engine placed into service on or after October 1, 2001, that operates less than 100 hours per year, based on a rolling 12-month average, in other than emergency situations; and meets the requirements for non-road engines as specified. §117.303(a)(11)(A)-(B)			
GRP-LIQLEG	EU	60III-LIQLEG	CO	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a CO emission limit of 3.5 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRP-LIQLEG	EU	60III-LIQLEG	NMHC and NO _x	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than 560 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with an	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						NMHC+NOx emission limit of 6.4 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.			
GRP-LIQLEG	EU	60IIII-LIQLEG	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRP-LIQLEG	EU	63ZZZZ-ENGINE	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
GRP-LIQSEG	EU	R7310-ENGINE	Exempt	30 TAC Chapter 117, Subchapter B	[G]§ 117.303(a)(11) [G]§ 117.310(f)	Units exempted from the provisions of this division	None	§ 117.340(j) § 117.345(f)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1) and 117.354(a)(5) include new, modified, reconstructed, or relocated stationary diesel engine placed into service on or after October 1, 2001, that operates less than 100 hours per year, based on a rolling 12-month average, in other than emergency situations; and meets the requirements for non-road engines as specified. §117.303(a)(11)(A)-(B)		[G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	
GRP-LIQSEG	EU	60III-LIQSEG	CO	40 CFR Part 60, Subpart III	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a CO emission limit of 3.5 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRP-LIQSEG	EU	60III-LIQSEG	NMHC and NO _x	40 CFR Part 60, Subpart III	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(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 75 KW and less	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.4211(c) [G]§ 60.4211(f)	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 1039-Appendix I.			
GRP-LIQSEG	EU	60III-LIQSEG	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
GRP-LIQSEG	EU	63ZZZ-LIQSEG	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	None	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						ignition engines as applicable. No further requirements apply for such engines under this part.			
GRP-LUBOIL	EP	115B-LUBEOIL	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(B) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream specified in §115.121(a)(1) of this title with a concentration of VOC less than 612 parts per million by volume (ppmv) is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2) § 115.126(4)	None
GRP-LUBOIL	EP	115B-LUBEOIL	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(A) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream having a combined weight of volatile organic compounds (VOC) equal to or less than 100 pounds in any continuous 24-hour period is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2) § 115.126(4)	None
GRP-MARINE	EU	R5211-MARINE1	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(5)(B) § 115.214(a)(3)(C) § 115.214(a)(3)(G) § 115.214(a)(3)(G)(i) § 115.217(a)(5)(B)(i)	Unloading of marine vessels is exempt from the requirements of §§115.212(a), 115.214(a), and 115.216 of this title, except as noted.	§ 115.214(a)(3)(B) § 115.214(a)(3)(B)(i)	§ 115.216 § 115.216(2)	None
GRP-MARINE	EU	R5211-MARINE2	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(5)(B) § 115.212(a)(6)(D) § 115.214(a)(3)(C) § 115.214(a)(3)(G) § 115.214(a)(3)(G)(i) § 115.217(a)(5)(B)(iii)	The marine vessel loading operations specified in §115.217(a)(5)(B)(ii)-(iv) are exempt from the requirements of §§115.212(a), 115.214(a), and 115.216 of this title, except as noted.	§ 115.214(a)(3)(B) § 115.214(a)(3)(B)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2)	None
GRP-PRO	EU	R115C-PRO	VOC	30 TAC Chapter 115, Loading and	§ 115.217(a)(3) § 115.212(a)(2)	Liquefied petroleum gas. All loading and unloading of	§ 115.214(a)(1)(A) §	§ 115.216 § 115.216(3)(A)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				Unloading of VOC	§ 115.214(a)(1)(B) § 115.214(a)(1)(D) § 115.214(a)(1)(D)(i)	liquefied petroleum gas is exempt from the requirements of this division, except for the specified requirements.	115.214(a)(1)(A)(i)	§ 115.216(3)(A)(i) § 115.216(3)(A)(ii) § 115.216(3)(A)(iii) § 115.216(3)(B)	
LIQFLARE	EU	R1111-LIQFLR	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period. Non-excessive upset events are subject to the provisions under §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
LIQFLARE	EP	115H-LIQFLR	HRVOC	30 TAC Chapter 115, HRVOC Vent Gas	§ 115.910 [G]§ 115.725(d)(1) § 115.725(d)(2) § 115.725(d)(2)(A)(i) [G]§ 115.725(d)(2)(A)(ii) § 115.725(d)(2)(A)(iii) § 115.725(d)(2)(A)(iv) § 115.725(d)(2)(B) § 115.725(d)(2)(B)(i) § 115.725(d)(2)(B)(ii) § 115.725(d)(2)(B)(iii) § 115.725(d)(2)(B)(iv) [G]§ 115.725(l) § 115.725(n) [G]§ 115.726(a)(2) **See Alternative Requirement	Alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division (relating to Vent Gas Control) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.	[G]§ 115.725(d)(1) § 115.725(d)(2) § 115.725(d)(2)(A)(i) [G]§ 115.725(d)(2)(A)(ii) § 115.725(d)(2)(A)(iii) § 115.725(d)(2)(A)(iv) § 115.725(d)(2)(B) § 115.725(d)(2)(B)(i) § 115.725(d)(2)(B)(ii) § 115.725(d)(2)(B)(iii) § 115.725(d)(2)(B)(iv) § 115.725(d)(3) § 115.725(d)(4) § 115.725(d)(5) § 115.725(d)(6) § 115.725(d)(7) § 115.725(k)(1)	§ 115.726(a)(1) § 115.726(a)(1)(A) § 115.726(d)(1) § 115.726(d)(10) § 115.726(d)(2) § 115.726(d)(3) § 115.726(d)(4) § 115.726(i) § 115.726(j)(1) § 115.726(j)(2) **See Alternative Requirement	§ 115.725(n) § 115.726(a)(1)(B) [G]§ 115.726(a)(2) **See Alternative Requirement

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)
							§ 115.725(m) **See Alternative Requirement		
LIQFLARE	EP	115B-LIQFLR	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.123(a)(1) § 115.910 **See Alternative Requirement	Alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division may be approved by the Executive Director in accordance with §115.910 of this title if emission reduction are demonstrated to be substantially equivalent.	[G]§ 115.125 § 115.126(2) ** See Periodic Monitoring Summary **See Alternative Requirement	§ 115.126 § 115.126(2) **See Alternative Requirement	**See Alternative Requirement
Z-10	EU	R7310-ENGINE	Exempt	30 TAC Chapter 117, Subchapter B	[G]§ 117.303(a)(11) [G]§ 117.310(f)	Units exempted from the provisions of this division except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1) and 117.354(a)(5) include new, modified, reconstructed, or relocated stationary diesel engine placed into service on or after October 1, 2001, that operates less than 100 hours per year, based on a rolling 12-month average, in other than emergency situations; and meets the requirements for non-road engines as specified. §117.303(a)(11)(A)-(B)	None	§ 117.340(j) § 117.345(f) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None
Z-10	EU	60III-ENGINE	CO	40 CFR Part 60, Subpart III	§ 60.4205(a)-Table 1	Owners and operators of emergency stationary CI	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must comply with a CO emission limit of 11.4 g/KW-hr, as listed in Table 1 to this subpart.			
Z-10	EU	60III-ENGINE	Hydrocarbons	40 CFR Part 60, Subpart IIII	§ 60.4205(a)-Table 1 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must comply with an HC emission limit of 1.3 g/KW-hr, as listed in Table 1 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
Z-10	EU	60III-ENGINE	NO _x	40 CFR Part 60, Subpart IIII	§ 60.4205(a)-Table 1 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 37 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must comply with a NO _x emission limit of 9.2 g/KW-hr, as listed in Table 1 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
Z-10	EU	60III-	PM	40 CFR Part 60,	§ 60.4205(a)-Table	Owners and operators of	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
		ENGINE		Subpart IIII	1 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and a displacement of less than 10 liters per cylinder and is a pre-2007 model year must comply with a PM emission limit of 0.54 g/KW-hr, as listed in Table 1 to this subpart.			
Z-10	EU	63ZZZZ-ENGINE	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
Z-210	EU	R7310-ENGINE	Exempt	30 TAC Chapter 117, Subchapter B	[G]§ 117.303(a)(11) [G]§ 117.310(f)	Units exempted from the provisions of this division except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1) and 117.354(a)(5) include new, modified, reconstructed, or relocated stationary diesel	None	§ 117.340(j) § 117.345(f) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						engine placed into service on or after October 1, 2001, that operates less than 100 hours per year, based on a rolling 12-month average, in other than emergency situations; and meets the requirements for non-road engines as specified. §117.303(a)(11)(A)-(B)			
Z-210	EU	60III-Z210	CO	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a CO emission limit of 3.5 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
Z-210	EU	60III-Z210	NMHC and NO _x	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 75 KW and less than or equal to 560 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with an NMHC+NO _x emission limit of 4.0 g/KW-hr, as	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.			
Z-210	EU	60IIII-Z210	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039-Appendix I § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 1039-Appendix I.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
Z-210	EU	60IIII-Z210	PM (Opacity)	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039.105(b)(1) § 1039.105(b)(2) § 1039.105(b)(3) § 60.4202(a)(2) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Emergency stationary 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 40 CFR 1039.105(b)(1)-(3).	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
Z-210	EU	63ZZZZ-	112(B)	40 CFR Part 63,	§ 63.6590(c)	Stationary RICE subject to	None	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
		Z210	HAPS	Subpart ZZZZ		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.			

Additional Monitoring Requirements

Periodic Monitoring Summary 42

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-LIQFLR	
Control Device ID No.: LIQFLARE	Control Device Type: Flare
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: 115B-FLR
Pollutant: VOC	Main Standard: § 115.123(a)(1)
Monitoring Information	
Indicator: Pilot Flame	
Minimum Frequency: Once per hour	
Averaging Period: N/A	
Deviation Limit: As required under AMOC-70, pilot flames must be continuously monitored to detect presence of a flame. When operating with dual, redundant pilot flames, loss of both the pilot flames shall be considered and reported as a deviation.	
Periodic Monitoring Text: Measure and record the presence of the pilot flame or maintain records of alarm events and duration of alarm events. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame or using an alarm that uses a thermocouple or other equivalent device to detect the absence of a flame. The monitoring instrumentation shall be maintained, calibrated and operated in accordance with manufacturer's specifications or other written procedures. Any monitoring data which indicates the lack of a pilot flame shall be considered and reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: LIQFLARE	
Control Device ID No.: LIQFLARE	Control Device Type: Flare
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: 115B-LIQFLR
Pollutant: VOC	Main Standard: § 115.123(a)(1)
Monitoring Information	
Indicator: Pilot Flame	
Minimum Frequency: Once per hour	
Averaging Period: N/A	
Deviation Limit: As required under AMOC-70, pilot flames must be continuously monitored to detect presence of a flame. When operating with dual, redundant pilot flames, loss of both the pilot flames shall be considered and reported as a deviation.	
Periodic Monitoring Text: Measure and record the presence of the pilot flame or maintain records of alarm events and duration of alarm events. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame or using an alarm that uses a thermocouple or other equivalent device to detect the absence of a flame. The monitoring instrumentation shall be maintained, calibrated and operated in accordance with manufacturer's specifications or other written procedures. Any monitoring data which indicates the lack of a pilot flame shall be considered and reported as a deviation.	

Permit Shield

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Permit Shield

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

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
FLR	N/A	40 CFR Part 60, Subpart A	The flare is not a control device used to comply with applicable subparts of parts 60 and 61.
FUG-LIQ123	N/A	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	Freeport LNG is not a natural gas processing operation as defined by 115.10 and potential fugitive emission sources from it are not subject to requirements of Chapter 115.
FUG-LIQ4	N/A	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	Freeport LNG is not a natural gas processing operation as defined by 115.10 and potential fugitive emission sources from it are not subject to requirements of Chapter 115.
GRP-DIESEL	CUBE-DIES, EG-1TK, EG-ADMINTK, EG-DOCKTK, FWPTK, JAM-DIES, LEACT-1, LEACT-2, LEGT-1, LEGT-2, LEGT-3, LEGT-4, LEGT-5, LEGT-6, LEGT-7, LFWPT-1, LFWPT-2, LFWPT-3, Z-10TK, Z-210TK	30 TAC Chapter 115, Storage of VOCs	The capacity of the storage tank is less than 1,000 gallons.
GRP-DIESEL	CUBE-DIES, EG-1TK, EG-ADMINTK, EG-DOCKTK, FWPTK, JAM-DIES, LEACT-1, LEACT-2, LEGT-1, LEGT-2, LEGT-3, LEGT-4, LEGT-5, LEGT-6, LEGT-7, LFWPT-1, LFWPT-2, LFWPT-3, Z-10TK, Z-210TK	40 CFR Part 60, Subpart Kb	The capacity of the storage tank is less than 75 cubic meters.
GRP-ETH	17V-54A, 17V-54B	40 CFR Part 60, Subpart Kb	The storage tank has a storage capacity of less than 75 cubic meters (19,813 gallons).
GRP-FUG	FUG, FUG-BOGLIQ, FUG-PHII	30 TAC Chapter 115, Fugitives Pet Ref B Counties	Freeport LNG is not a natural gas processing operation as defined by 115.10 and potential fugitive emission sources from it are not subject to requirements of Chapter 115

Permit Shield

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

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
GRP-LNGTK	18T-3, T-1, T-2	40 CFR Part 60, Subpart Kb	The maximum true vapor pressure of the stored volatile organic liquid (VOL) is less than 3.5 kPa.
GRP-MARINE	P1-DOCK, P2-DOCK	40 CFR Part 63, Subpart Y	The loading operations are at loading berths that only transfer liquids containing organic HAP as impurities.
GRP-PRO	17V-53A, 17V-53B	40 CFR Part 60, Subpart Kb	The storage tank has a storage capacity of less than 75 cubic meters (19,813 gallons).
GRP-STRMCEP	17U-50, 17U-61, 17U-62, 17U-63, 18U-50, STC-2400, STC-T-1, STC-T-2, STC-T-3, STC-T-4	30 TAC Chapter 115, Water Separation	The water separators are fully covered and designed solely to capture stormwater, spills or exterior surface cleanup waters.
GRP-STRMCEP	17U-50, 17U-61, 17U-62, 17U-63, 18U-50, STC-2400, STC-T-1, STC-T-2, STC-T-3, STC-T-4	40 CFR Part 63, Subpart VV	The emissions from the water separators are not subject to another subpart of 40 CFR parts 60, 61, or 63 that references the use of MACT VV.
LIQFLARE	N/A	40 CFR Part 60, Subpart A	The flare is not a control device used to comply with applicable subparts of parts 60 and 61.
LIQFLARE	N/A	40 CFR Part 63, Subpart A	The flare is not a control device used to comply with applicable subparts of part 63.

New Source Review Authorization References

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New Source Review Authorization References by Emission Unit..... 49

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.: N304	Issuance Date: 12/19/2025
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.: 55464	Issuance Date: 10/06/2025
Authorization No.: 100114	Issuance Date: 12/19/2025
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.122	Version No./Date: 09/04/2000
Number: 106.227	Version No./Date: 09/04/2000
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.265	Version No./Date: 09/04/2000
Number: 106.355	Version No./Date: 11/01/2001
Number: 106.412	Version No./Date: 09/04/2000
Number: 106.433	Version No./Date: 09/04/2000
Number: 106.452	Version No./Date: 09/04/2000
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.473	Version No./Date: 09/04/2000
Number: 106.476	Version No./Date: 09/04/2000
Number: 106.492	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 106.532	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

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

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization**
11K-30	PROPANE COMPRESSORS LUBE OIL VENTS	100114, N304
11K-31	LP MR COMPRESSORS LUBE OIL VENTS	100114, N304
11K-32/11K-33	MP/HP MR COMPRESSORS LUBE OIL VENTS	100114, N304
12K-30	PROPANE COMPRESSORS LUBE OIL VENTS	100114, N304
12K-31	LP MR COMPRESSORS LUBE OIL VENTS	100114, N304
12K-32/12K-33	MP/HP MR COMPRESSORS LUBE OIL VENTS	100114, N304
13K-30	PROPANE COMPRESSORS LUBE OIL VENTS	100114, N304
13K-31	LP MR COMPRESSORS LUBE OIL VENTS	100114, N304
13K-32/13K-33	MP/HP MR COMPRESSORS LUBE OIL VENTS	100114, N304
14K-30	PROPANE COMPRESSORS LUBE OIL VENTS	100114, N304
14K-31	LP MR COMPRESSORS LUBE OIL VENTS	100114, N304
14K-32/14K-33	MP/HP MR COMPRESSORS LUBE OIL VENTS	100114, N304
17U-50	STORM DRAIN UNIT	106.532/09/04/2000
17U-61	STORM DRAIN UNIT	106.532/09/04/2000
17U-62	STORM DRAIN UNIT	106.532/09/04/2000
17U-63	STORM DRAIN UNIT	106.532/09/04/2000
17V-53A	PROPANE TANK A	106.476/09/04/2000
17V-53A	UNLOADING INTO PROPANE PRESSURIZED STORAGE TANK	100114, N304
17V-53B	PROPANE TANK B	106.476/09/04/2000
17V-53B	UNLOADING INTO PROPANE PRESSURIZED STORAGE TANK	100114, N304
17V-54A	ETHYLENE TANK A	106.476/09/04/2000

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**
17V-54A	UNLOADING INTO ETHYLENE PRESSURIZED STORAGE TANK	100114, N304
17V-54B	ETHYLENE TANK B	106.476/09/04/2000
17V-54B	UNLOADING INTO ETHYLENE PRESSURIZED STORAGE TANK	100114, N304
18T-3	LNG STORAGE TANK 3	106.476/09/04/2000
18U-50	STORM DRAIN UNIT	106.532/09/04/2000
CUBE-DIES	UNLOADING INTO DIESEL CUBE TANK	106.412/09/04/2000
CUBE-GAS	UNLOADING INTO GASOLINE CUBE TANK	106.412/09/04/2000
EG-1	EMERGENCY GENERATOR EG-1	55464
EG-1TK	EMERGENCY GENERATOR EG-1 DIESEL DAY TANK	55464
EG-ADMIN	EMERGENCY GENERATOR EG-ADMIN	55464
EG-ADMINTK	EMERG GENERATOR EG-ADMIN DIESEL DAY TANK	55464
EG-DOCK	EMERGENCY GENERATOR EG-DOCK	55464
EG-DOCKTK	EMERG GENERATOR EG-DOCK DIESEL DAY TANK	55464
ETHCOMP	DEPRESSURIZE MR COMPRESSOR ETHYLENE	100114, N304
FLR	FLARE	55464
FUG	FUGITIVES	55464
FUG-BOGLIQ	BOG LIQUEFACTION SYSTEM FUGITIVES	55464
FUG-LIQ123	FUGITIVES - TRAIN 1-TRAIN 3	100114, N304
FUG-LIQ4	FUGITIVES - TRAIN 4	100114, N304
FUG-PHII	PHASE II FUGITIVES	55464
FWP2	DIESEL-FUELED FIRE WATER PUMP	106.511/09/04/2000

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**
FWPTK	FIRE WATER PUMP DIESEL DAY TANK	55464
JAM-DIES	UNLOADING INTO JAM DIESEL TANK	106.412/09/04/2000
LEACT-1	BACKUP AIR COMPRESSOR TANK 1 UNLOADING	100114, N304
LEACT-2	BACKUP AIR COMPRESSOR TANK 2 UNLOADING	100114, N304
LEGT-1	EMERGENCY GENERATOR TANK 1 UNLOADING	100114, N304
LEGT-2	EMERGENCY GENERATOR TANK 2 UNLOADING	100114, N304
LEGT-3	EMERGENCY GENERATOR TANK 3 UNLOADING	100114, N304
LEGT-4	EMERGENCY GENERATOR TANK 4 UNLOADING	100114, N304
LEGT-5	EMERGENCY GENERATOR TANK 5 UNLOADING	100114, N304
LEGT-6	EMERGENCY GENERATOR TANK 6 UNLOADING	100114, N304
LEGT-7	EMERGENCY GENERATOR TANK 7 - TRAIN 4 UNLOADING	100114, N304
LFWPT-1	DIESEL FIREWATER TANK 1 UNLOADING	100114, N304
LFWPT-2	DIESEL FIREWATER TANK 2 UNLOADING	100114, N304
LFWPT-3	DIESEL FIREWATER TANK 3 UNLOADING	100114, N304
LIQEAC-1	EMERGENCY AIR COMPRESSOR	100114, N304
LIQEAC-2	TRAIN 4 - EMERGENCY AIR COMPRESSOR	100114, N304
LIQEG-1	EMERGENCY GENERATOR 1	100114, N304
LIQEG-2	EMERGENCY GENERATOR 2	100114, N304
LIQEG-3	EMERGENCY GENERATOR 3	100114, N304
LIQEG-4	EMERGENCY GENERATOR 4	100114, N304
LIQEG-5	EMERGENCY GENERATOR - GUARD HOUSE/ADMIN AREA	100114, N304

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**
LIQEG-6	EMERGENCY GENERATOR - DOCK 2	100114, N304
LIQEG-7	TRAIN 4 - EMERGENCY GENERATOR 4	100114, N304
LIQFLARE	LIQUEFACTION FLARE	100114, N304
LIQFLAREMSS	MAINTENANCE, STARTUP, SHUTDOWN (MSS) VENTING TO FL	100114, N304
LIQFLR-MCH	FINAL COOLING MCHE	100114, N304
LIQFLR-PRO	DEPRESSURIZE MR COMPRESSOR PROPANE	100114, N304
LIQFLR-PSV	PSV VENTS AND PUMP SEALS TO FLARE	100114, N304
LIQFLR-TUR	TURNDOWN LNG PRODUCTION	100114, N304
LIQFWP-1	FIRE WATER PUMP 1	100114, N304
LIQFWP-2	FIRE WATER PUMP 2	100114, N304
LIQFWP-3	FIRE WATER PUMP 3	100114, N304
P1-DOCK	PHASE I LNG VESSEL LOADING/UNLOADING DOCK	55464, 100114, N304
P2-DOCK	PHASE II LNG VESSEL LOADING/UNLOADING DOCK	55464, 100114, N304
STC-2400	STORM DRAIN UNIT	106.532/09/04/2000
STC-T-1	STORM DRAIN UNIT	106.532/09/04/2000
STC-T-2	STORM DRAIN UNIT	106.532/09/04/2000
STC-T-3	STORM DRAIN UNIT	106.532/09/04/2000
STC-T-4	STORM DRAIN UNIT	106.532/09/04/2000
T-1	LNG STORAGE TANK 1	106.476/09/04/2000
T-2	LNG STORAGE TANK 2	106.476/09/04/2000
Z-10	EMERGENCY AIR COMPRESSOR Z-10	55464

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**
Z-10TK	EMERGENCY AIR COMPRESSOR Z-10 DIESEL DAY TANK	55464
Z-210	EMERGENCY AIR COMPRESSOR Z-210	55464
Z-210TK	EMERG AIR COMPRESSOR Z-210 DIESEL DAY TANK	55464

**This column may include Permit by Rule (PBR) numbers and version dates, PBR Registration numbers in brackets, Standard Permit Registration numbers, Minor NSR permit numbers, and Major NSR permit numbers.

Alternative Requirement

Alternative Requirement..... 55

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 26, 2018

9489 0090 0027 6009 3651 77

MR MARK W MALLET PE
VICE PRESIDENT OPERATIONS AND ENGINEERING
FREEPORT LNG DEVELOPMENT LP
333 CLAY ST STE 5050
HOUSTON TX 77002-4101

Re: Alternative Method of Control (AMOC) No. 70
Liquefaction Plant Multi Point Ground Flare Application
Freeport LNG Liquefaction Plant
Regulated Entity Number: RN103196689
Customer Reference Number: CN601720345
Associated Permit Number: 100114

Dear Mr. Mallett:

The Executive Director of the Texas Commission on Environmental Quality (TCEQ) has made a final decision to approve Freeport LNG Development, L.P.'s (Freeport LNG's) above-referenced Alternate Means of Control (AMOC) Plan for the construction and use of a multi-point ground flare (MPGF) system to control emissions from planned maintenance, startup, and shutdown events (MSS) as well emergency situations. This AMOC Plan will allow the natural gas Liquefaction Plant (LP) to use the MPGF system with the specified provisions as an alternative to complying with 30 Texas Administrative Code (TAC) Chapter 115, Subchapter B; Division 2; Vent Gas Control, §115.122(a)(1).

During the required public comment period, no comments were received.

The TCEQ has been delegated authority to enforce the above cited standards and is authorized to approve this AMOC. You are reminded that approval of any AMOC shall not abrogate the Executive Director or Administrator's authority under the Act or in any way prohibit later canceling the AMOC.

Enclosed you will find the authorized AMOC Plan and Provisions.

You are reminded per §115.913(c) that all representations with regard to this AMOC application and Plan become conditions upon which the AMOC is approved and varying from these representations is not allowed if the change will cause a change in the method of control of emissions, the character of the emissions, result in an increase in the discharge of the various emissions, emission limits, control requirements, monitoring, testing, reporting, or recordkeeping requirements.

Please note you have an opportunity to appeal the Executive Director's determination on the AMOC Plan to the commission within 15 days from the date of receipt of this letter under § 115.914(7). Also, under § 115.914(8), the EPA has 45 days from the date of the TCEQ's final approval of the AMOC Plan to inform the Air Permits Division that it disapproves the AMOC Plan. Following § 115.914(9)-(11), the AMOC plan will become effective with the latter of either EPA acceptance of, or the Commission's issuance of the AMOC plan. Once effective, the AMOC becomes part of the State Implementation Plan.

P.O. Box 13087 · Austin, Texas 78711-3087 · 512-239-1000 · tceq.texas.gov

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March 26, 2018
Page 2
Mr. Mark W. Mallett, P.E.

Re: Permit Number: 100114, AMOC No. 70

This AMOC approval supersedes certain requirements and representations in Permit No. 100114. To ensure effective and consistent enforceability, we request that Freeport LNG incorporate this AMOC into the permit through submittal of an alteration no later than 90 days after this approval.

This AMOC Plan and Provisions change applicable requirements for the site, including existing monitoring, reporting, recordkeeping, and testing requirements which has implications for the applicability of any Site Operating Permit (SOP) requirements. We request that Freeport LNG update the appropriate SOP application to incorporate this AMOC Plan and Provisions.

If you need further information or have any questions, please contact Ms. Anne Inman, P.E. at (512) 239-1276 or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,



Michael Wilson, P.E., Director
Air Permits Division
Office of Air
Texas Commission on Environmental Quality

cc: Mr. Roberto Vara, P.E., Freeport LNG Development, L.P., RVara@FreeportLNG.com
Mr. Ruben Velasquez, P.E., Atkins North America, Ruben.Velasquez@atkinsglobal.com
Ms. Karen Carroll, Director, Environmental Health, Brazoria County Health Department
Air Program Manager, Region 12
Mr. Sam Short, Manager, Energy/Combustion Section, Air Permits Division, OA: MC-163
Air Permits Section Chief, New Source Review Section (6PD-R), U.S. Environmental Protection Agency, Region 6, Dallas
Ms. Brenda Shine, U.S. Environmental Protection Agency, Research Triangle Park
Shine.Brenda@epa.gov

Enclosure

Project Number: 271588

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



Alternative Method of Control (AMOC) Plan
AMOC No.: AMOC-70
Freeport LNG Development, L.P.
Liquefaction Plant Multi-Point Ground Flare (MPGF) System
Quintana, Brazoria County
Regulated Entity Number: RN103196689

- A. This AMOC Plan Authorization shall apply at the Freeport LNG Development, L.P. (Freeport LNG) Liquefaction Plant located in Quintana, Brazoria County identified by Regulated Entity Number RN103196689. This plan is issued under Title 30 Texas Administrative Code Section 115.910 (30 TAC § 115.910) for the high pressure stages of a multi-point ground flare (MPGF) system used for emissions control. The MPGF is used during high-pressure emission events such as planned maintenance, start-ups and shut-downs (MSS) as well as unplanned emergency and upset situations (including, but not limited to, emissions from miscellaneous venting from pressure relief valves, pump seals, and gas analyzers). The Plan conditions do not apply when gas streams consist only of nonregulated gases, including, but not limited to, water, nitrogen, ethane, noble gases, hydrogen, and oxygen.
- B. A copy of the AMOC application and the AMOC Plan provisions must be kept on-site or at a centralized location and made available at the request of personnel from the TCEQ or any pollution control agency with jurisdiction. The AMOC application is defined by the application received July 11, 2017 and supporting documentation submitted through November 13, 2017.
- C. This authorization is granted under § 115.910 for emissions sources regulated by 30 TAC Chapter 115, Subchapter B: General Volatile Organic Compound Sources, Division 2: Vent Gas Control and Subchapter H: Highly Reactive Volatile Organic Compounds, Division 1: Vent Gas Control. This AMOC shall apply in lieu of the requirements of 30 TAC §§ 115.122(a) and 115.722(d), as applicable. Compliance with this AMOC is independent of Freeport LNG's obligation to comply with all other applicable requirements of 30 TAC Chapter 115, TCEQ permits and applicable state and federal law. The monitoring and testing requirements of 30 TAC §§ 115.125 and 115.725 shall continue to apply even though the flare is no longer subject to 30 TAC §§ 115.122(a) and 115.722(d).
- Compliance with the requirements of this plan does not assure compliance with requirements of an applicable New Source Performance Standard, an applicable National Emission Standard for Hazardous Air Pollutants or an Alternative Means of Emission Limitation and does not constitute approval of alternative standards for these regulations.
- D. In accordance with 30 TAC § 115.913(c), all representations submitted for this plan, as well as the provisions listed here, become conditions upon which this AMOC Plan is issued. It is unlawful to vary from the emission limits, control requirements, monitoring, testing, reporting or recordkeeping requirements of this Plan.

- E. The high pressure stages of the MPGF system identified as EPN LIQFLARE in Permit No. 100114 are subject to this AMOC plan. The system collects and combusts hydrocarbon streams during high-pressure emission events such as planned maintenance, start-ups and shut-downs (MSS) as well as unplanned emergency and upset situations (including, but not limited to, emissions from miscellaneous venting from pressure relief valves, pump seals, and gas analyzers). Operations of the pressure-assisted MPGF will achieve a reduction in emissions at least equivalent to the reduction in emissions being controlled by a steam-assisted, air-assisted, or non-assisted flare complying with the requirements of §115.122(a), §115.122(d), or 40 CFR 60.18(b).
- F. The high pressure MPGF system stages must be designed and operated such that the following are met:
1. Operating Requirements: For all high pressure stages, the net heating value of the flare vent gas combustion zone (*NHVcz*) is greater than or equal to 800 British thermal units per standard cubic foot (Btu/scf); or the combustion zone gas lower flammability limit (*LFLcz*) is less than or equal to 6.5 percent by volume.

The owner or operator must demonstrate compliance with the *NHVcz* or *LFLcz* metric by continuously complying with a 15-minute block average. The operator must calculate and monitor for the *NHVcz* or *LFLcz* according to the following:

a. Calculation of *NHVcz*

- i. The owner or operator shall determine the net heating value using the following equation:

$$NHV_{vg} = \sum_{i=1}^n x_i NHV_i$$

Where:

NHV_{vg} = Net heating value of flare vent gas, British thermal units per standard cubic foot (Btu/scf).

Flare vent gas means all gas containing regulated material found just prior to the MPGF. This gas includes all flare waste gas (*i.e.*, gas from facility operations that is directed to a flare for the purpose of disposing of the gas), flare sweep gas, flare purge gas and flare supplemental gas, but does not include pilot gas or nonregulated gases, including, but not limited to, water, nitrogen, ethane, noble gases, hydrogen, and oxygen.

i = Individual component in flare vent gas.

n = Number of components in flare vent gas.

x_i = Concentration of component *i* in flare vent gas, volume percent (vol %).

NHV_i = Net heating value of component *i* determined as the heat of combustion where the net enthalpy per mole of offgas is based on combustion at 25 degrees Celsius (°C) and 1 atmosphere (or constant pressure) with water in the gaseous state from values published in the literature, and then the values converted to a volumetric basis using 20 °C for "standard temperature." Table 1 (Appendix) summarizes component properties including net heating values.

- ii. For MPGF Stages, *NHV_{vg}* = *NHVcz*.

b. Calculation of LFL_{Cz}

- i. The owner or operator shall determine LFL_{Cz} from compositional analysis data by using the following equation:

$$LFL_{vg} = \frac{1}{\sum_{i=1}^n \left[\frac{\chi_i}{LFL_i} \right]} * 100 \%$$

Where:

LFL_{vg} = Lower flammability limit of flare vent gas, volume percent (vol %)

n = Number of components in the vent gas.

i = Individual component in the vent gas.

χ_i = Concentration of component i in the vent gas, vol %.

LFL_i = Lower flammability limit of component i as determined using values published by the U.S. Bureau of Mines (Zabetakis, 1965), vol %. All inerts, including nitrogen, are assumed to have an infinite LFL (e.g., $LFL_{N_2} = \infty$, so that $cN_2/LFL_{N_2} = 0$). LFL values for common flare vent gas components are provided in Table 1 (Appendix).

- ii. For MPGF Stages, $LFL_{vg} = LFL_{Cz}$.

- c. The operator shall install, operate, calibrate and maintain a monitoring system capable of continuously measuring flare vent gas volumetric flow rate (Q_{vg}).

- i. The flow rate monitoring system must be able to correct for the temperature and pressure of the system and output parameters in standard conditions (i.e., a temperature of 20 degrees C (68 ° F) and a pressure of 1 atmosphere).
- ii. Mass flow monitors may be used for determining volumetric flow rate of flare vent gas provided the molecular weight of the flare vent gas is determined using compositional analysis so that the mass flow rate can be converted to volumetric flow at standard conditions using the following equation:

$$Q_{vol} = \frac{Q_{mass} \times 385.3}{MW_t}$$

where:

Q_{vol} = volumetric flow rate in scf per second (scf/s).

Q_{mass} = mass flow rate in pounds per second (lb/s)

385.3 = conversion factor scf per pound-mole

MW_t = molecular weight of the gas at the flow monitoring location, pounds per pound-mole

- d. The operator shall install, operate, calibrate and maintain a monitoring system capable of continuously measuring (i.e., at least once every 15-minutes), temperature consistent with the applicable requirements in 30 TAC §115 for purposes of correcting flow rate to standard conditions. The monitor must meet the accuracy and calibration specifications annually.

- e. The operator shall install, operate, calibrate and maintain a monitoring system capable of continuously measuring (*i.e.*, at least once every 15- minutes), calculating, and recording the individual component concentrations present in the flare vent gas or install, operate, calibrate and maintain a monitoring system capable of continuously measuring, calculating and recording *NH₃* (in Btu/scf).
 - f. For each measurement produced by the monitoring system, the operator shall determine the 15-minute block average as the arithmetic average of all measurements made by the monitoring system within the 15-minute period.
 - g. The operator must follow the calibration and maintenance procedures according to Table 2 (Appendix). The operator must monitor downtime associated with maintenance periods, instrument adjustments or checks to maintain precision and accuracy. Zero and span adjustments may not exceed 5 percent of the time the flare is receiving regulated material. Calibration and maintenance procedures conducted when the flare is not receiving regulated material are excluded from the monitor downtime calculation.
2. Pilot Flame Requirements: The MPGF system shall be operated with a flame present at all times when in use. Each burner on MPGF Stages burners must be equipped with at least two pilots with a continuously lit pilot flame. When operating with dual, redundant pilot flames, the loss of one of the pilot flames is not considered a complete loss of pilot flame to the flare system for purposes of compliance with the reporting requirements of Condition 6.c.i of this AMOC.

The pilot flame(s) must be continuously monitored by a thermocouple or any other equivalent device used to detect the presence of a flame. The time, date and duration of any complete loss of pilot flame on any of the individual burners, must be recorded. Each monitoring device must be maintained or replaced at a frequency in accordance with the manufacturer's specifications.

3. Visible Emission Requirements: When the flare is receiving regulated material, the MPGF system shall be operated with no visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. A video camera that is capable of continuously recording (*i.e.*, at least one frame every 15 seconds with time and date stamps) images of the flare flame, at a reasonable distance above the flare radiant fencing, and at an angle suitable for visible emissions observations must be used to demonstrate compliance with this requirement. The owner or operator must provide real-time video surveillance camera output to the control room or other continuously manned location where the video camera images may be viewed at any time.
4. Monitor Requirements: The operator of a MPGF system shall install and operate pressure monitor(s) on the main flare header, as well as a valve position indicator monitoring system for each staging valve to ensure that the MPGF operates within the range of tested conditions or within the range of the manufacturer's specifications. The pressure monitor shall meet the requirements in Table 2 (Appendix).
- Monitor downtime associated with maintenance periods, instrument adjustments or checks to maintain precision and accuracy and zero and span adjustments may not exceed 5 percent of the time the flare is receiving regulated material. Calibration and maintenance procedures conducted when the flare is not receiving regulated material are excluded from the monitor downtime calculation.
5. Recordkeeping Requirements: All data must be recorded and maintained for a minimum of five years or for as long as applicable rule subpart(s) specify flare records should be kept, whichever is longer. Records must be maintained onsite and made available upon request by authorized representatives of the executive director, U.S. EPA, and any local air pollution control agency with jurisdiction.

6. Reporting Requirements

- a. The information specified in (b) and (c) below should be reported in the timeline specified by the applicable rules for which the MPGF will control emissions.
- b. Owners or operators should include the following information in their initial Monitoring Plan:
 - i. Specify flare design as a pressure assisted MPGF.
 - ii. All visible emission readings, *NHVcz* and/or *LFLcz* determinations, and flow rate measurements. For MPGF, exit velocity determinations do not need to be reported.
 - iii. All periods during the compliance determination when a complete loss of pilot flame on any stage of the MPGF burners occurs.
 - iv. All periods during the compliance determination when the pressure monitor(s) on the main flare header show the MPGF burners operating outside the range of tested conditions or outside the range of the manufacturer's specifications.
 - v. All periods during the compliance determination when the staging valve position indicator monitoring system indicates a stage of the MPGF should not be in operation, but is; or when a stage of the MPGF should be in operation, but is not.
- c. The owner or operator shall notify the executive director of periods of excess emissions in their Title V Periodic Reports. These periods of excess emissions shall include:
 - i. Each 15-minute block during which there was at least one minute when regulated material was routed to the MPGF and complete loss of pilot flame occurred in any given stage of the MPGF.
 - ii. Periods of visible emissions events that are time and date stamped and exceed more than 5 minutes in any 2-hour consecutive period.
 - iii. Each 15-minute block period for which an applicable combustion zone operating limit (*i.e.*, *NHVcz* or *LFLcz*) is not met for the MPGF when regulated material is being combusted in the flare. Indicate the date and time for each period, the *NHVcz* and/or *LFLcz* operating parameter for the period, the type of monitoring system used to determine compliance with the operating parameters (*e.g.*, gas chromatograph or calorimeter), and the MPGF stages which were in use.
 - iv. Periods when the pressure monitor(s) on the main flare header show the MPGF burners are operating outside the range of tested conditions or outside the range of the manufacturer's specifications. Indicate the date and time for each period, the pressure measurement, the stage(s) and number of MPGF burners affected and the range of tested conditions or manufacturer's specifications.
 - v. Periods when the staging valve position indicator monitoring system indicates a stage of the MPGF should not be in operation, but is; or when a stage of the MPGF should be in operation, but is not. Indicate the date and time for each period, whether the stage was supposed to be open but was closed or vice versa and the stage(s) and number of MPGF burners affected.

APPENDIX Table 1 — Individual Component Properties

Component	Molecular Formula	MWi (lb/ lb mol)	NHVi (Btu/scf)	LFLi (volume %)
Acetylene	C2H2	26.04	1,404	2.5
Benzene	C6H6	78.11	3,591	1.3
1,2- Butadiene	C4H6	54.09	2,794	2.0
1,3- Butadiene	C4H6	54.09	2,690	2.0
iso-Butane	C4H10	58.12	2,957	1.8
n-Butane	C4H10	58.12	2,968	1.8
cis-Butene	C4H8	56.11	2,830	1.6
iso-Butene	C4H8	56.11	2,928	1.8
trans-Butene	C4H8	56.11	2,826	1.7
Carbon Dioxide	CO2	44.01	0	∞
Carbon Monoxide	CO	28.01	316	12.5
Cyclopropane	C3H6	42.08	2,185	2.4
Ethane	C2H6	30.07	1,595	3.0
Ethylene	C2H4	28.05	1,477	2.7
Hydrogen	H2	2.02	274	4.0
Hydrogen Sulfide	H2S	34.08	587	4.0
Methane	CH4	16.04	896	5.0
Methylacetylene	C3H4	40.06	2,088	1.7
Nitrogen	N2	28.01	0	∞
Oxygen	O2	32.00	0	∞
Pentane+ (C5+)	C5H12	72.15	3,655	1.4
Propadiene	C3H4	40.06	2,066	2.16
Propane	C3H8	44.10	2,281	2.1
Propylene	C3H6	42.08	2,150	2.4
Water	H2O	18.02	0	∞

APPENDIX Table 2 — Accuracy and Calibration Requirements

Parameter	Accuracy requirements	Calibration requirements
Flare Vent Gas Flow Rate	<p>±20 percent of flow rate at velocities ranging from 0.1 to 1 feet per second.</p> <p>±5 percent of flow rate at velocities greater than 1 foot per second.</p>	<p>Performance evaluation biennially (every two years) and following any period of more than 24 hours throughout which the flow rate exceeded the maximum rated flow rate of the sensor, or the data recorder was off scale.</p> <p>Checks of all mechanical connections for leakage monthly. Visual inspections and checks of system operation every 3 months, unless the system has a redundant flow sensor.</p> <p>Select a representative measurement location where swirling flow or abnormal velocity distributions due to upstream and downstream disturbances at the point of measurement are minimized.</p>
Pressure	<p>±5 percent over the normal range measured or 0.12 kilopascals (0.5 inches of water column), whichever is greater.</p>	<p>Review pressure sensor readings at least once a week for straight-line (unchanging) pressure and perform corrective action to ensure proper pressure sensor operation if blockage is indicated.</p> <p>Performance evaluation annually and following any period of more than 24 hours throughout which the pressure exceeded the maximum rated pressure of the sensor, or the data recorder was off scale. Checks of all mechanical connections for leakage monthly. Visual inspection of all components for integrity, oxidation and galvanic corrosion every 3 months, unless the system has a redundant pressure sensor.</p> <p>Select a representative measurement location that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.</p>
Net Heating Value by Calorimeter	<p>±2 percent of span</p>	<p>Calibration requirements should follow manufacturer's recommendations at a minimum. Temperature control (heated and/or cooled as necessary) the sampling system to ensure proper year-round operation.</p> <p>Where feasible, select a sampling location at least two equivalent diameters downstream from and 0.5 equivalent diameters upstream from the nearest disturbance. Select the sampling location at least two equivalent duct diameters from the nearest control device, point of pollutant generation, air in leakages, or other point at which a change in the pollutant concentration or emission rate occurs.</p>
Net Heating Value by Gas Chromatograph	<p>As specified in Performance Specification 9 of 40 CFR part 60 Appendix B.</p>	<p>Follow the procedure in Performance Specification 9 of 40 CFR Part 60 Appendix B, except that a single daily mid-level calibration check can be used, a triplicate mid-level check weekly, and the multi-point calibration can be conducted quarterly (rather than monthly), and the sampling line temperature must be maintained at a minimum temperature of 60 °C (rather than 120 °C).</p>

APPENDIX 3 — Acronyms and Abbreviations

The AMOC uses multiple acronyms and terms, defined here (please note this list is not exhaustive):

AMEL	alternative means of emission limitation
AMOC	Alternate Method of Compliance or Control
Btu/scf	British thermal units per standard cubic foot
CAA	Clean Air Act
CBI	confidential business information
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
EPN	Emission Point Number
Eqn	equation
HAP	hazardous air pollutants
HP	high pressure
LFL	lower flammability limit
<i>LFLcz</i>	lower flammability limit of combustion zone gas
<i>LFLvg</i>	lower flammability limit of flare vent gas
MPGF	multi-point ground flares
MSS	planned maintenance, start-ups and shut-downs
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHV	net heating value
<i>NHVcz</i>	net heating value of combustion zone gas
<i>NHVvg</i>	net heating value of flare vent gas
NSPS	New Source Performance Standards
OAQPS	Office of Air Quality Planning and Standards
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
scf	standard cubic feet
VOC	volatile organic compounds

Appendix A

Acronym List 66

Acronym List

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

ACFM	actual cubic feet per minute
AMOC	alternate means of control
ARP	Acid Rain Program
ASTM	American Society of Testing and Materials
B/PA	Beaumont/Port Arthur (nonattainment area)
CAM	Compliance Assurance Monitoring
CD	control device
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
COMS	continuous opacity monitoring system
CVS	closed vent system
D/FW	Dallas/Fort Worth (nonattainment area)
EP	emission point
EPA	U.S. Environmental Protection Agency
EU	emission unit
FCAA Amendments	Federal Clean Air Act Amendments
FOP	federal operating permit
gr/100 scf	grains per 100 standard cubic feet
HAP	hazardous air pollutant
H/G/B	Houston/Galveston/Brazoria (nonattainment area)
H ₂ S	hydrogen sulfide
ID No.	identification number
lb/hr	pound(s) per hour
MACT	Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr	Million British thermal units per hour
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NESHAP	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO _x	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PEMS	predictive emissions monitoring system
PM	particulate matter
ppmv	parts per million by volume
PRO	process unit
PSD	prevention of significant deterioration
psia	pounds per square inch absolute
RO	Responsible Official
SIP	state implementation plan
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 68

Major NSR Summary Table

Permit Numbers: 100114 and N304				Issuance Date: December 19, 2025			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (5)	Special Condition/ Application Information	Special Condition/ Application Information	Special Condition/ Application Information
LIQFLARE	Liquefaction Flare (Before construction of flare gas recovery and Train 4) (7)	NO _x	80.10	47.43	5, 6, 7, 8, 14, 15, 17, 18, 19, 20	5, 8, 14, 15, 17, 18, 24	5, 8
		NO _x (MSS)	6674.08				
		CO	318.99	188.91			
		CO (MSS)	26580.25				
		SO ₂	0.71	0.34			
		SO ₂ (MSS)	13.38				
		VOC	6.26	19.55			
		VOC (MSS)	3538.79				
LIQFLARE	Liquefaction Flare (Before construction of Train 4 and after construction of flare gas recovery) (7)	NO _x	40.16	40.19	5, 6, 7, 8, 14, 15, 17, 18, 19, 20	5, 8, 14, 15, 17, 18, 24	5, 8
		NO _x (MSS)	6634.15				
		CO	159.95	160.07			
		CO (MSS)	26421.21				
		SO ₂	0.36	0.21			
		SO ₂ (MSS)	13.03				
		VOC	3.15	18.41			
		VOC (MSS)	3535.68				
LIQFLARE	Liquefaction Flare (After construction of Train 4 and flare gas recovery) (7)	NO _x	53.47	42.61	5, 6, 7, 8, 14, 15, 17, 18, 19, 20	5, 8, 14, 15, 17, 18, 24	5, 8
		NO _x (MSS)	6647.46				
		CO	212.96	169.68			
		CO (MSS)	26474.23				
		SO ₂	0.47	0.25			
		SO ₂ (MSS)	13.15				

Major NSR Summary Table

Permit Numbers: 100114 and N304					Issuance Date: December 19, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (5)	Special Condition/ Application Information	Special Condition/ Application Information	Special Condition/ Application Information
		VOC	4.19	18.79			
		VOC (MSS)	3536.71				
LIQFWP-1	Fire Water Pump 1	NO _x	3.25	0.16	3, 4, 9	3, 4, 9, 24	3, 4, 9
		CO	0.85	0.04			
		PM	0.10	<0.01			
		PM ₁₀	0.10	<0.01			
		PM _{2.5}	0.10	<0.01			
		SO ₂	0.01	<0.01			
		H ₂ SO ₄ (8)	<0.01	<0.01			
		VOC	0.11	0.01			
LIQFWP-2	Fire Water Pump 2	NO _x	3.25	0.16	3, 4, 9	3, 4, 9, 24	3, 4, 9
		CO	0.85	0.04			
		PM	0.10	<0.01			
		PM ₁₀	0.10	<0.01			
		PM _{2.5}	0.10	<0.01			
		SO ₂	0.01	<0.01			
		H ₂ SO ₄ (8)	<0.01	<0.01			
		VOC	0.11	0.01			
LIQFWP-3	Fire Water Pump 3	NO _x	3.25	0.16	3, 4, 9	3, 4, 9, 24	3, 4, 9
		CO	0.85	0.04			
		PM	0.10	<0.01			
		PM ₁₀	0.10	<0.01			

Major NSR Summary Table

Permit Numbers: 100114 and N304					Issuance Date: December 19, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (5)	Special Condition/ Application Information	Special Condition/ Application Information	Special Condition/ Application Information
		PM _{2.5}	0.10	<0.01			
		SO ₂	0.01	<0.01			
		H ₂ SO ₄ (8)	<0.01	<0.01			
		VOC	0.11	0.01			
LIQEG-1	Emergency Generator 1 (DQFAH)	NO _x	1.38	0.03	3, 4, 9	3, 4, 9, 24	3, 4, 9
		CO	2.00	0.05			
		PM	0.05	<0.01			
		PM ₁₀	0.05	<0.01			
		PM _{2.5}	0.05	<0.01			
		SO ₂	0.02	<0.01			
		H ₂ SO ₄ (8)	<0.01	<0.01			
		VOC	0.13	<0.01			
		NH ₃	0.51	0.01			
LIQEG-2	Emergency Generator 2 (DQFAH)	NO _x	1.38	0.03	3, 4, 9	3, 4, 9, 24	3, 4, 9
		CO	2.00	0.05			
		PM	0.05	<0.01			
		PM ₁₀	0.05	<0.01			
		PM _{2.5}	0.05	<0.01			
		SO ₂	0.02	<0.01			
		H ₂ SO ₄ (8)	<0.01	<0.01			
		VOC	0.13	<0.01			
		NH ₃	0.51	0.01			

Major NSR Summary Table

Permit Numbers: 100114 and N304					Issuance Date: December 19, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (5)	Special Condition/ Application Information	Special Condition/ Application Information	Special Condition/ Application Information
LIQEG-3	Emergency Generator 3 (DQFAH)	NO _x	1.38	0.03	3, 4, 9	3, 4, 9, 24	3, 4, 9
		CO	2.00	0.05			
		PM	0.05	<0.01			
		PM ₁₀	0.05	<0.01			
		PM _{2.5}	0.05	<0.01			
		SO ₂	0.02	<0.01			
		H ₂ SO ₄ (8)	<0.01	<0.01			
		VOC	0.13	<0.01			
		NH ₃	0.51	0.01			
LIQEG-4	Emergency Generator 4 (DQFAH)	NO _x	1.38	0.03	3, 4, 9	3, 4, 9, 24	3, 4, 9
		CO	2.00	0.05			
		PM	0.05	<0.01			
		PM ₁₀	0.05	<0.01			
		PM _{2.5}	0.05	<0.01			
		SO ₂	0.02	<0.01			
		H ₂ SO ₄ (8)	<0.01	<0.01			
		VOC	0.13	<0.01			
		NH ₃	0.51	0.01			
LIQEG-5	Emergency Generator – Guard House/Admin Area (DQDAA)	NO _x	3.50	0.09	3, 4, 9	3, 4, 9, 24	3, 4, 9
		CO	0.79	0.02			
		PM	0.04	<0.01			
		PM ₁₀	0.04	<0.01			

Major NSR Summary Table

Permit Numbers: 100114 and N304					Issuance Date: December 19, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (5)	Special Condition/ Application Information	Special Condition/ Application Information	Special Condition/ Application Information
		PM _{2.5}	0.04	<0.01			
		SO ₂	0.01	<0.01			
		H ₂ SO ₄ (8)	<0.01	<0.01			
		VOC	0.05	<0.01			
LIQEG-6	Emergency Generator – Dock 2 (DSGAD)	NO _x	2.64	0.07	3, 4, 9	3, 4, 9, 24	3, 4, 9
		CO	0.18	<0.01			
		PM	0.02	<0.01			
		PM ₁₀	0.02	<0.01			
		PM _{2.5}	0.02	<0.01			
		SO ₂	<0.01	<0.01			
		H ₂ SO ₄ (8)	<0.01	<0.01			
		VOC	0.02	<0.01			
LIQEG-7	Train 4 - Emergency Generator 4 (DQFAH)	NO _x	1.38	0.03	3, 4, 9	3, 4, 9, 24	3, 4, 9
		CO	2.00	0.05			
		PM	0.05	<0.01			
		PM ₁₀	0.05	<0.01			
		PM _{2.5}	0.05	<0.01			
		SO ₂	0.02	<0.01			
		H ₂ SO ₄ (8)	<0.01	<0.01			
		VOC	0.13	<0.01			
		NH ₃	0.51	0.01			
LIQEAC-1	Emergency Air	NO _x	1.87	0.05	3, 4, 9	3, 4, 9, 24	3, 4, 9

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (5)	Special Condition/ Application Information	Special Condition/ Application Information	Special Condition/ Application Information
	Compressor (QSX15)	CO	1.73	0.04			
		PM	0.10	<0.01			
		PM ₁₀	0.10	<0.01			
		PM _{2.5}	0.10	<0.01			
		SO ₂	0.01	<0.01			
		H ₂ SO ₄ (8)	<0.01	<0.01			
		VOC	0.10	<0.01			
		NH ₃	0.06	<0.01			
LIQEAC-2	Train 4 - Emergency Air Compressor (QSX15)	NO _x	1.87	0.05	3, 4, 9	3, 4, 9, 24	3, 4, 9
		CO	1.73	0.04			
		PM	0.10	<0.01			
		PM ₁₀	0.10	<0.01			
		PM _{2.5}	0.10	<0.01			
		SO ₂	0.01	<0.01			
		H ₂ SO ₄	<0.01	<0.01			
		VOC	0.10	<0.01			
		NH ₃	0.06	<0.01			
LEGT-1	Emergency Generator Tank 1	VOC	0.01	<0.01			
LEGT-2	Emergency Generator Tank 2	VOC	0.01	<0.01			
LEGT-3	Emergency Generator Tank 3	VOC	0.01	<0.01			
LEGT-4	Emergency Generator	VOC	0.01	<0.01			

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (5)	Special Condition/ Application Information	Special Condition/ Application Information	Special Condition/ Application Information
	Tank 4						
LEGT-5	Emergency Generator Tank 5	VOC	0.01	<0.01			
LEGT-6	Emergency Generator Tank 6	VOC	0.01	<0.01			
LEGT-7	Emergency Generator Tank 7 – Train 4	VOC	0.01	<0.01			
LEACT-1	Backup Air Compressor Tank 1	VOC	0.01	<0.01			
LEACT-2	Backup Air Compressor Tank 2 - Train 4	VOC	0.01	<0.01			
LFWPT-1	Diesel Firewater Tank 1	VOC	0.01	<0.01			
LFWPT-2	Diesel Firewater Tank 2	VOC	0.01	<0.01			
LFWPT-3	Diesel Firewater Tank 3	VOC	0.01	<0.01			
FUG-LIQ123	Fugitives Train 1 – Train 3 (6)	VOC	1.14	5.00	10, 11, 12, 13, 17	10, 13, 17, 24	10, 17
		VOC (9)	1.16	5.10	10, 11, 12, 13, 17	10, 13, 17, 24	10, 17
FUG-LIQ4	Fugitives Train 4 (6)	VOC	0.39	1.70	10, 11, 12, 13, 17	10, 13, 17, 24	10, 17
		VOC (9)	0.43	1.87	10, 11, 12, 13, 17	10, 13, 17, 24	10, 17
11K-30, 12K-30, 13K-30 14K-30 11K-31 12K-31 13K-31 14K-31 11K-32/11K-33 12K-32/12K-33	Propane Compressors Lube Oil Vent Propane Compressors Lube Oil Vent Propane Compressors Lube Oil Vent Propane Compressors Lube Oil Vent LP MR Compressors Lube Oil Vent LP MR Compressors Lube Oil Vent	PM	0.03	0.11	10, 11, 12, 13, 17	10, 13, 17, 24	10, 17
		PM ₁₀	0.03	0.11			
		PM _{2.5}	0.03	0.11			
		VOC	<0.01	<0.01			

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Permit Numbers: 100114 and N304				Issuance Date: December 19, 2025			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (5)	Special Condition/ Application Information	Special Condition/ Application Information	Special Condition/ Application Information
13K-32/13K-33 14K-32/14K-33	LP MR Compressors Lube Oil Vent LP MR Compressors Lube Oil Vent MP/HP MR Compressor Lube Oil Vents MP/HP MR Compressor Lube Oil Vents MP/HP MR Compressor Lube Oil Vents MP/HP MR Compressor Lube Oil Vents						
MSS-FUG1-3	Fugitives - Train 1 - Train 3 Vessel Opening for Maintenance	VOC	29.27	0.04	14, 15, 16, 17, 18, 21	14, 15, 16, 17, 18, 21, 24	14
MSS-FUG4	Fugitives - Train 4 Vessel Opening for Maintenance	VOC	29.27	0.01	14, 15, 16, 17, 18, 21	14, 15, 16, 17, 18, 21, 24	14
ALL	All EPNs at the site	Individual HAP	-	<10			
		Total HAPs	-	<25			

- (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
 - H₂SO₄ - sulfuric acid mist
 - H₂S - hydrogen sulfide
 - NH₃ - ammonia
- (4) Planned startup and shutdown (SS) lbs/hour emissions for all pollutants are authorized even if not specifically identified as SS.

- (5) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period. Annual emission rates for each source include planned SS emissions.
- (6) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (7) Only one Flare operating scenario is authorized at a time.
- (8) Sulfuric acid mist is a subset of PM_{2.5} emissions.
- (9) Limit after the flare gas recovery has been installed.



Texas Commission on Environmental Quality Air Quality Permit

A Permit Is Hereby Issued To
Freeport LNG Development, L.P.
Authorizing the Construction and Operation of
Freeport LNG Liquefaction Plant
Located at **Quintana, Brazoria County, Texas**
Latitude 28.928333 *Longitude* -95.316666

Permits: 100114 and N304

Amendment Date: 12/19/25

Expiration Date: July 16, 2024

Brooke J. Paup
For the Commission

- Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)]¹
- 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]
- 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)]
- 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)]
- 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)]
- 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)]
- Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and

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

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

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

Common Acronyms in Air Permits

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

PAL = plant-wide applicability limit
PBR = Permit(s) by Rule
PCP = pollution control project
PEMS = predictive emission monitoring system
PID = photo ionization detector
PM = periodic monitoring
PM = total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
PM_{2.5} = particulate matter equal to or less than 2.5 microns in diameter
PM₁₀ = total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
POC = products of combustion
ppb = parts per billion
ppm = parts per million
ppmv = parts per million (by) volume
psia = pounds (per) square inch, absolute
psig = pounds (per) square inch, gage
PTE = potential to emit
RA = relative accuracy
RATA = relative accuracy test audit
RM = reference method
RVP = Reid vapor pressure
scf = standard cubic foot or feet
scfm = standard cubic foot or feet (per) minute
SCR = selective catalytic reduction
SIL = significant impact levels
SNCR = selective non-catalytic reduction
SO₂ = sulfur dioxide
SOCMI = synthetic organic chemical manufacturing industry
SRU = sulfur recovery unit
TAC = Texas Administrative Code
TCAA = Texas Clean Air Act
TCEQ = Texas Commission on Environmental Quality
TD = Toxicology Division
TLV = threshold limit value
TMDL = total maximum daily load
tpd = tons per day
tpy = tons per year
TVP = true vapor pressure
VOC = volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
VRU = vapor recovery unit or system

Special Conditions

Permit Numbers 100114 and N304

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and those sources are limited to the emission limits on that table and other operating conditions specified in this permit. Also, this permit authorizes the emissions from planned maintenance, startup, and shutdown.
2. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the MAERT. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions.

Federal Applicability

3. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60):
 - A. Subpart A, General Provisions.
 - B. Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
4. These facilities shall comply with all applicable requirements of the EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63:
 - A. Subpart A, General Provisions.
 - B. Subpart ZZZZ: National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Flare

5. The multi-point ground flare (MPGF), EPN LIQFLARE, shall be designed to comply with the following requirements, and to achieve at least 99% destruction efficiency for VOC.
 - A. The flare (EPN LIQFLARE) will be pressure-assisted.
 - B. The flare shall be operated with a flame present at all times when in use. The pilot flame shall be continuously monitored by a thermocouple, flame-ionization rod, acoustical monitor, infrared monitor, or other equivalent technology. The time, date, and duration of any loss of pilot flame shall be recorded. If operating with dual, redundant pilot flames, the loss of one of the pilot flames is not considered a loss of pilot flame to the flare system. Each pilot flame monitoring device shall be accurate to within manufacturer's specifications, and shall be calibrated at a frequency in accordance with the manufacturer's specifications. **(02/18)**
 - C. The flare shall be operated with no visible emissions except during periods not to exceed a total of five minutes during any two consecutive hours as determined and documented using 40 CFR Part 60, Appendix A, Test Method 22 or equivalent method. **(02/18)**
 - D. The permit holder shall install a continuous, pressure and temperature compensated, flow monitor that provides a record of the vent stream flow to the flare in units of standard cubic feet. The flow monitor shall be installed in the vent stream such that the total vent stream to

flare is measured. Flow measurements shall be taken continuously and values shall be recorded on an average one hour basis.

The flow monitor shall be calibrated according to manufacturer's instructions, or shall have a calibration check by using a second calibrated flow measurement device, annually to meet the following accuracy (uncertainty) specifications: the flow monitor shall be +/- 5.0%, temperature sensor shall be +/- 2.0% at absolute temperature, and pressure sensor shall be +/- 5.0 mmHg.

The flow monitor shall operate at least 95% of the time when the flare is operational, averaged over a rolling twelve (12) month period.

- E. The requirements of this condition are not applicable during emission events. Emission events are not authorized by this permit.

A composition analyzer or calorimeter provide a record of composition the flare shall be installed the meets the requirements in AMOC 70 and follows the QA/QC procedures in AMOC 70.

The calorimeter or composition analyzer shall operate at least 95% of the time when the flare is operational, averaged over a rolling twelve (12) month period.

- F. Operations of the flare are subject to the requirements of the Alternate Means of Control Plan (AMOC 70). Where applicable the requirements of AMOC 70 shall supersede the requirements of this Special Condition.

- 6. When gas conditioning a ship to accept liquefied natural gas, the gas stream must be redirected into the boil-off gas system, to the existing Terminal Flare (EPN FLR), or as authorized under Air Quality Permit 55464. Gas conditioning emissions may not be sent to the EPN LIQFLARE.

Fuel Gas

- 7. Combustion units are subject to the following requirements for fuel sulfur:
 - A. Fuel for the flare pilots is limited to boil-off gas, pipeline quality natural gas, or a blend of these fuels.
 - B. Fuel gas streams specified in paragraph A shall have a total sulfur content not to exceed 1.5 grains per 100 dscf on a rolling 12-month average.
 - C. Compliance with the requirements of paragraph B of this Special Condition shall be verified through sampling of fuel gas at least semi-annually. Fuel gas streams identified in paragraph A may be sampled individually, or a representative sample of blended fuel gas may be taken from the fuel gas header.

For natural gas, tariff sheets documenting the sulfur content of the fuel may be retained in lieu of performing sampling.

Compliance Assurance Monitoring

- 8. The following requirements apply to capture systems for the flare (EPN LIQFLARE).
 - A. The capture system shall be inspected in accordance with the site LDAR program required by these Special Conditions.

- B. If there is a bypass for the control device, comply with either of the following requirements:
- (1) Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
 - (2) Once a month, inspect the valves, verifying that the position of the valves and the condition of the car seals that prevent flow out the bypass.

A bypass does not include authorized analyzer vents, highpoint bleeder vents, low point drains, or rupture discs upstream of pressure relief valves if the pressure between the disc and relief valve is monitored and recorded at least weekly. A deviation shall be reported if the monitoring or inspections indicate bypass of the control device when it is required to be in service per this permit.

- C. The date and results of each inspection performed shall be recorded. If the results of any inspection are not satisfactory, the deficiencies shall be recorded, and the permit holder shall promptly take necessary corrective action, recording each action with the date completed.

Emergency Engines

9. The following requirements apply to the emergency generators (EPNs LIQEG-1 through LIQEG-7 and LIQEAC-1 and LIQEAC-2) and the emergency firewater pumps (EPNs LIQFWP-1, LIQFWP-2, and LIQFWP-3):
- A. Fuel for each engine shall be limited to ultra-low sulfur diesel (ULSD) containing no more than 15 parts per million (ppm) total sulfur by weight total sulfur.
 - B. Each emergency firewater pump (EPNs LIQFWP-1, LIQFWP-2, and LIQFWP-3) shall be limited to 100 hours per year of maintenance checks, readiness testing, and non-emergency operation, as defined at 40 CFR § 63.6640(f).
 - C. Each emergency generator (EPNs LIQEG-1 through LIQEG-7 and LIQEAC-1 and LIQEAC-2) shall be limited to 50 hours per year of non-emergency operation, as defined at 40 CFR § 63.6640(f).
 - D. Each engine shall be equipped with a non-resettable hour meter.
 - E. The emergency generators (EPNs LIQEG-1, 2, 3, and 4 and LIQEAC-1) shall satisfy the Tier 4 exhaust emission standards specified at Appendix I to 40 CFR Part 1039.
 - F. Each firewater pump (EPNs LIQFWP-1, LIQFWP-2, and LIQFWP-3) and emergency generators (EPNs LIQEG-5 and LIQEG-6) shall satisfy the Tier 3 exhaust emission standards specified at Appendix I to 40 CFR Part 1039.
 - G. Compliance with the emission limits of paragraph E and F of this Special Condition shall be demonstrated by retaining a copy of the manufacturers' certificate of conformity.

Fugitives

Piping, Valves, Pumps, Agitators, and Compressors - Intensive Directed Maintenance – 28LAER

10. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:

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

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

- piping and instrumentation diagram (PID);
 - a written or electronic database or electronic file;
 - color coding;
 - a form of weatherproof identification; or
 - designation of exempted process unit boundaries.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in paragraph A above. If an unsafe to monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance.

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

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

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

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

The percent of connectors leaking shall be determined using the following formula:

$$\frac{C_l + C_s}{C_t} \times 100 = C_p$$

Where:

- C_l = the number of connectors found leaking by the end of the monitoring period, either by Method 21 or sight, sound, and smell.
- C_s = the number of connectors for which repair has been delayed and are listed on the facility shutdown log.
- C_t = the total number of connectors in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including non-accessible and unsafe-to-monitor connectors.
- C_p = the percentage of leaking connectors for the monitoring period.

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

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

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

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

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

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

- H. Damaged or leaking valves, connectors, compressor seals, pump seals, and agitator seals found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.
- I. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall

indicate dates, times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.

- J. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS), and does not constitute approval of alternative standards for these regulations.

- K. In lieu of the monitoring frequency specified in paragraph F, valves in gas and light liquid service may be monitored on a semiannual basis if the percent of valves leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

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

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

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

$$\frac{(V_l + V_s)}{V_t} \times 100 = V_p$$

Where:

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

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

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

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

- M. Any component found to be leaking by physical inspection (i.e., sight, sound, or smell) shall be repaired or monitored with an approved gas analyzer within 15 days to determine whether the component is leaking in excess of 500 ppmv of VOC. If the component is found to be leaking in excess of 500 ppmv of VOC, it shall be subject to the repair and replacement requirements contained in this special condition.
11. The alternative screening procedure ("soap bubble test") as specified in 40 CFR 60, Appendix A-7, Method 21, Section 8.3.3 may be used for the purpose of verifying that the components are not leaking in lieu of the procedure specified in Special Condition No. 10.E, 10.F, or 10.G, or 10.H. **(06/20)**
 12. All accessible connectors in gas/vapor and light liquid service shall be monitored quarterly with an approved gas analyzer in accordance with Items E, F, and H of Special Condition No. 10 that are applicable to monitoring of connectors. **(02/18)**

- A. Connectors may be monitored on a semiannual basis if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

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

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

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

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

Where:

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

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

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

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

Optical Gas Imaging

13. The following modifications to the 28LAER program specified in Special Condition Nos. 10 and 12 may be implemented. These modifications are specified in order for the permit holder to be allowed to implement an alternate work practice (AWP) as an alternative to the current Method 21 monitoring requirements specified in Special Condition Nos. 10 and 12. Prior to implementing this AWP, the permit holder shall notify the Houston Regional Office of their intent to use the alternative work practice in writing as described in 30 TAC §115.358 (g). **(08/19)**

- A. In lieu of the Method 21 monitoring requirements of Special Condition Nos. 10 and 12, the permit holder may monitor components on a bi-monthly basis using an optical gas imaging camera (OGIC) meeting the requirements of 40 Code of Federal Regulations (CFR) §60.18(i)(1) as described in Attachment A of this permit. Components that would be considered inaccessible (e.g., insulated components), difficult-to-monitor (DTM), or unsafe-to-monitor (UTM) when using a Method 21 instrument will be monitored with the OGIC so long as such components are not considered DTM or UTM, as defined in Paragraph G of this condition, when using an OGIC.
- B. All components described above must also be monitored annually using an approved gas analyzer conforming to the requirements listed in Method 21 of 40 CFR part 60, appendix A. Subsequent annual monitoring must be conducted every 12 months from the initial annual monitoring period. As an option, a facility may choose to space out the Method 21 monitoring of all components over a 12-month period, as long as all components are monitored on a set schedule every 12 months. Method 21 monitoring for components that are added to an area may be completed during the next scheduled annual Method 21 monitoring event for that area provided that the components are monitored within 12 months of being placed in

service. This requirement does not apply to components that would be considered DTM or UTM when using a Method 21 instrument. **(06/20)**

- C. All OGIC operators shall meet the minimum training requirements in 30 Texas Administrative Code (TAC) §115.358(h) as specified in subparagraph 2.1.5 of Attachment A of this permit.
- D. An OGIC daily verification check shall be performed prior to a monitoring survey as specified in 40 CFR 60.18 (i) (2) (i) through (iv). The daily OGIC verification check shall be conducted by each separate OGIC operator that will be performing imaging using the same OGIC for that day.
- E. Bi-monthly monitoring using the OGIC will be performed following the procedures outlined in paragraph 2 and subparagraphs 2.1.1 through 2.1.6 of Attachment A of this permit.
- F. When monitoring using the OGIC, components within the OGIC field of view will be observed for a minimum of three seconds. All emissions imaged by the optical gas imaging instrument are considered to be leaks and are subject to repair. All emissions visible to the naked eye are also considered to be leaks and are subject to repair.
- G. When a leak is identified with the OGIC, an approved gas analyzer conforming to the requirements listed in Method 21 of 40 CFR part 60, appendix A will be used to monitor and record the concentration of the leak before repair. Repaired components will be remonitored to verify the success of the repair using an OGIC, an approved gas analyzer, or the soap bubble test described in Section 8.3.3 of Method 21. Scenarios where a leak is detected by the OGIC but a Method 21 approved gas analyzer reading is not required include: components that are considered DTM or UTM with a Method 21 instrument and components that are insulated and therefore not accessible for Method 21 instrument monitoring. A difficult-to-monitor component is a component that cannot be inspected without elevating the monitoring personnel more than two meters above a permanent support surface or that requires a permit for confined space entry as defined in 29 CFR §1910.146. An unsafe-to-monitor component is a component that the owner or operator determines is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of conducting the monitoring. **(06/20)**
- H. The alternative monitoring schedule authorized in Subparagraph **Error! Reference source not found.** of Special Condition No. **Error! Reference source not found.** is not applicable.
- I. The following records shall be kept for a period of at least 5 years and be made available to the TCEQ Executive Director or designated representative upon request:
 - (1) Records of the make, model, and manufacturer specifications of each OGIC used to demonstrate compliance with Subparagraph A of this condition.
 - (2) Records demonstrating compliance with Subparagraph C of this condition.
 - (3) The equipment, processes, and facilities for which the owner or operator chooses to use the alternative work practice.
 - (4) The detection sensitivity level selected from Table 1 to subpart A of 40 CFR 60.18 for the optical gas imaging instrument.
 - (5) The analysis to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, as specified in paragraph (i)(2)(i)(A) of 40 CFR 60.18.
 - (6) The technical basis for the mass fraction of detectable chemicals used in the equation in paragraph (i)(2)(i)(B) of 40 CFR 60.18.

- (7) Records of the daily OGIC verification check. Record the distance, per paragraph (i)(2)(iv)(B) of 40 CFR 60.18, and the flow meter reading, per paragraph (i)(2)(iv)(C) of 40 CFR 60.18, at which the gas was imaged during the daily OGIC verification check. Keep a video record of the daily instrument check for each configuration of the optical gas imaging instrument used during the leak survey (for example, the daily instrument check must be conducted for each lens used). The video record must include a time and date stamp for each daily instrument check. The video record must be kept for 5 years.
- (8) Records of OGIC monitoring shall indicate dates, times, component areas monitored, results of imaging and the results of Method 21 monitoring for those components found leaking with the OGIC. In addition, a video record must be used to document the leak survey results. The video record must include a time and date stamp for each monitoring event. A video record can be used to meet the recordkeeping requirements if each piece of regulated equipment selected for this work practice can be identified in the video record. The video record must be kept for 5 years.
- (9) The records of the annual Method 21 screening required in subparagraph B of this condition shall identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in Subparagraph **Error! Reference source not found.** of Special Condition No. 10.
- (10) Records of repairs to fugitive components shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components.
- (11) Records of maintenance to the OGIC, as applicable, will be maintained by the OGIC owner/operator.

Maintenance, Startup, and Shutdown

14. This permit authorizes the planned maintenance, startup, and shutdown (MSS) activities summarized in the MSS Activity Summary (Special Condition No. 15). The performance of each planned MSS activity and the emissions associated with it shall be recorded and include at least the following information:
 - A. the process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;
 - B. the type of planned MSS activity and the reason for the planned activity;
 - C. the common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;
 - D. the date and time of the MSS activity and its duration;
 - E. the estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.
15. All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis. Planned startup and shutdown emissions due to the activities identified in this Special Condition are authorized from the facilities and temporary equipment and control devices identified in the Special Conditions of the permit.

MSS Activity Summary

Facility	Activity	EPN
All facilities	Depressurize and drain equipment following shutdown	MSS-FUG1-3 MSS-FUG4
Train start-up and shut-down during turnaround, planned maintenance and/or repair	Venting to the LQF Flare	LIQFLARE

16. Process units and facilities shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements.
- A. The process equipment shall be depressurized to a control device or a controlled recovery system prior to venting to atmosphere, degassing, or draining liquid. Equipment that only contains material that is liquid with VOC partial pressure less than 0.50 psi at the normal process temperature and 95°F may be opened to atmosphere and drained in accordance with paragraph C of this special condition. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded.
 - B. If mixed phase materials must be removed from process equipment, the cleared material shall be routed to a knockout drum or equivalent to allow for managed initial phase separation. If the VOC partial pressure is greater than 0.50 psi at either the normal process temperature or 95°F, any vents in the system must be routed to a control device or a controlled recovery system. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. Control must remain in place until degassing has been completed or the system is no longer vented to atmosphere.
 - C. All liquids from process equipment or storage vessels must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be drained into a closed vessel or closed liquid recovery system unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour of being drained.
 - D. If the VOC partial pressure is greater than 0.50 psi at the normal process temperature or 95°F, facilities shall be degassed using good engineering practice to ensure air contaminants are removed from the system through the control device or controlled recovery system to the extent allowed by process equipment or storage vessel design. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. The facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The venting shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery system utilized shall be recorded with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.
 - (1) The locations and/or identifiers where the purge gas or steam enters the process equipment or storage vessel and the exit points for the exhaust gases shall be

recorded (process flow diagrams [PFDs] or piping and instrumentation diagrams [P&IDs] may be used to demonstrate compliance with the requirement). If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system before the vent stream may be sampled to verify acceptable VOC concentration prior to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition No. 17. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged. If there is not a connection (such as a sample, vent, or drain valve) available from which a representative sample may be obtained, a sample may be taken upon entry into the system after degassing has been completed. The sample shall be taken from inside the vessel so as to minimize any air or dilution from the entry point. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. Documented site procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures) that achieve at least the same level of purging may be used in lieu of the above.

17. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below.
 - A. VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR 60, Appendix A) with the following exceptions:
 - (1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate (RF) shall be recorded. If the RF of the VOC (or mixture of VOCs) to be monitored is greater than 2.0, the VOC concentration shall be determined as follows:
$$\text{VOC Concentration} = \text{Concentration as read from the instrument} * \text{RF}$$

In no case should a calibration gas be used such that the RF of the VOC (or mixture of VOCs) to be monitored is greater than 5.0.
 - (2) Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes, recording VOC concentration each minute. As an alternative the VOC concentration may be monitored over a five-minute period with an instrument designed to continuously measure concentration and record the highest concentration read. The highest measured VOC concentration shall be recorded and shall not exceed the specified VOC concentration limit prior to uncontrolled venting.
 - B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.
 - (1) The air contaminant concentration measured as defined in (3) is less than 80 percent of the range of the tube and is at least 20 percent of the maximum range of the tube.
 - (2) The tube is used in accordance with the manufacturer's guidelines.

- (3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

10,000*mole fraction of the total air contaminants present that can be detected by the tube.

The mole fraction may be estimated based on process knowledge. The release concentration and basis for its determination shall be recorded.

Records shall be maintained of the tube type, range, measured concentrations, and time the samples were taken.

- C. Lower explosive limit measured with a lower explosive limit detector.

- (1) The detector shall be calibrated within 30 days of use with a certified methane gas standard at 25% of the lower explosive limit (LEL) for methane. The LEL response shall be within 95% of that for methane. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.
- (2) A functionality test shall be performed on each detector within 24 hours of use with a certified gas standard at 25% of the LEL for methane. The LEL monitor shall read no lower than 90% of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.
- (3) A certified pentane gas standard equivalent to 25% of the LEL for pentane may be used for calibration and functionality tests.

18. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.
19. Control devices required by this permit for emissions from planned MSS activities are limited to the flare (EPN LIQFLARE). The flare shall meet all the requirements identified in AMOC 70 requirements.
20. Planned maintenance, startup, and shutdown vent gas releases to the flare (EPN LIQFLARE) shall be limited to no more than 454.50 million standard cubic feet per year (MMscf/yr) based on a rolling 12-month total.
21. Sections of the plant handling propane or mixed refrigerant undergoing shutdown or maintenance that requires breaking a line or opening a vessel shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements.

- A. The facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The venting shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery system utilized shall be recorded with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.

- B. The locations and/or identifiers where the purge gas enters the process equipment or storage vessel and the exit points for the exhaust gases shall be documented; (process flow diagrams [PFDs] or piping and instrumentation diagrams [P&IDs] may be used to demonstrate compliance with the requirement). **(02/18)**
- C. If the process equipment requires purging, it will be conducted using best management and good air pollution control practices.

Projected Actual Emissions

22. The construction of Trains 1-3 associated with the permit application PI-1 dated August 9, 2022, TCEQ NSR Project No. 346087, was determined to not be subject to major new source review through the use of projected actual emission rates for one or more facilities associated with the project. Actual emissions from the sources using a projected actual as listed in the table of this special condition shall be monitored as represented in the application and records maintained, and reports provided in accordance with 30 TAC §116.127. Records shall be maintained for five years from the resumption of regular operations. Records shall include the date of resumption of regular operations after the project change.

FIN*	EPN	Permit No.	Pollutant	Baseline Actual Emissions (tpy)	Projected Actual Emissions (tpy)
FLR	FLR	NSR Permit No. 55464	NOX	3.10	22.50
			CO	17.83	77.93
			VOC	0.39	4.38
			SO ₂	0.04	2.05
			H ₂ SO ₄	0.00	0.16

A report is due to the Executive Director in any calendar year in which the actual emissions for the project exceed the total baseline actual emissions in the table above by 250 tpy for CO and 25 tpy for NOx netting significant emission rate, and a projected actual emission for any facility is exceeded in accordance with 116.127(c).

If netting is triggered during the project and a projected actual emission is exceeded, and actual emissions do not exceed the netting significant emission rate for the calendar year, the permit holder will maintain an emissions record for the calendar year and no report is required.

Netting and Offsets

23. This Nonattainment New Source Review permit is issued/approved based on the requirement that the permit holder offset the project emission increase for facilities authorized by this permit prior to the commencement of operation, through participation in the TCEQ Emission Banking and Trading (EBT) Program in accordance with the rules in 30 TAC Chapter 101, Subchapter H.

- A. The permit holder shall use 53.4 tons per year (tpy) of NO_x ECs from TCEQ credit certificate numbers 3991, 4044, 4050, 4051, 4052, 4053, 4054, and 4163 to offset the 41.02 tpy NO_x project emission increase for the facilities authorized by this permit at a ratio of 1.3 to 1.0.
- B. The permit holder shall use 32.1 tpy of VOC credits to offset the 24.63 tpy VOC project emission increase for the facilities authorized by this permit at a ratio of 1.3 to 1.0.
 - (1) The permit holder shall use 32.1 tpy of VOC ECs from TCEQ credit certificate numbers 4028, 4029, 4030, 4031, 4032, 4033, 4034, 4035, 4036, and 4040 to offset the VOC project emission increase at a ratio of 1.3 to 1.0.
- C. Prior to the start of operation of the flare gas recovery project (an emissions reduction project), the permit holder shall use 9.4 tpy of NO_x credits to offset the 7.24 tpy NO_x project emission increase for the facilities authorized by this permit at a ratio of 1.3 to 1.0.
 - (1) The permit holder shall use 9.4 tpy of NO_x credits from TCEQ credit certificate number D3813 to offset the NO_x project emission increase at a ratio of 1.3 to 1.0.
- D. Prior to the commencement of operation, the permit holder shall obtain approval from the TCEQ EBT Program for the credits being used and then submit a permit alteration or amendment request to the TCEQ Air Permits Division (and copy the TCEQ Regional Office) to identify approved credits by TCEQ credit certificate number.

Recordkeeping

- 24. The records required by these special conditions shall be maintained in either hard copy or electronic format and shall be maintained for at least five years. These records shall be made immediately available at the request of personnel from the TCEQ or any air pollution control agency with jurisdiction.

Date: 12/19/25

Brooke J. Paup

Attachment A

Permit Numbers 100114 and N304 General Optical Gas Imaging Camera Operational Procedures Freeport LNG

1 OGIC SPECIFICATIONS

Freeport LNG will utilize a FLIR GF320 Optical Gas Imaging Camera (OGIC) for streams with predominantly high concentrations of hydrocarbons and a FLIR GF343 for streams with predominantly high concentrations of carbon dioxide, or other equivalent OGICs. The FLIR GF320 is designed to detect hydrocarbons (e.g., methane and VOCs), while FLIR GF343 is designed to detect carbon dioxide.

Freeport LNG will maintain records of the make, model, and manufacturer specifications of each OGIC instrument used under Freeport LNG's LDAR program.

2 OGIC MONITORING PROCEDURES

OGIC monitoring will be performed by appropriately trained personnel in accordance with the procedures summarized below.

- A. On a daily basis, prior to beginning each OGIC monitoring event, monitoring personnel will complete an OGIC daily verification check in accordance with Section 2.1.1 of this Plan.
- B. All components subject to the LDAR program and designated for OGIC monitoring will be monitored with the OGIC unless considered difficult-to-monitor or unsafe-to-monitor.
- C. The distance between the OGIC and the components being surveyed shall not exceed the maximum distance (D_{Max}) established during the OGIC daily verification check. The operator will establish an optimized D_{Max} (i.e., as large as possible) during the survey, taking into account weather conditions, thermal background, viewing angle of components, and distance to monitored components.
- D. Throughout the survey, monitoring personnel will endeavor to stay within a close distance to monitored components, if possible. If, based on the judgement of monitoring personnel, the distance to the monitored component is equal to or greater than 50% of D_{Max} , monitoring personnel will use a laser range finder or equivalent device to ensure compliance with the established D_{Max} . Monitoring personnel may perform an additional OGIC daily verification check to establish a new D_{Max} , as needed.
- E. All visible emissions from fugitive components identified using the OGIC are considered leaks subject to repair requirements.
- F. Monitoring personnel will qualitatively assess monitoring conditions throughout the survey and will follow the procedures identified in Section 2.1.2 if adverse monitoring conditions are encountered.
- G. The procedures identified in Section 2.1.3 will be followed to ensure that adequate thermal background exists when viewing each component with the OGIC.
- H. The procedures identified in Section 2.1.4 will be followed if interferences are encountered during the survey.

- I. Monitoring personnel will meet the qualification and experience criteria outlined in Section 2.1.5 of this Plan.
- J. The OGIC will be maintained as outlined in Section 2.1.6 of this Plan.

2.1.1 OGIC Daily Verification Check

An OGIC performance check will be performed on a daily basis prior to OGIC monitoring surveys, and at other times as needed, in accordance with the following procedure.

1. Start the OGIC according to the manufacturer's instructions, ensuring that all appropriate settings conform to the manufacturer's instructions.
2. After the OGIC start-up process is completed and the OGIC is set to the intended settings, view the image produced by the OGIC to ensure that the image is normal. If the image is abnormal, perform a lens assessment and follow a proper lens cleaning procedure, if necessary.
3. Calculate the mass flow rate to be used in the daily instrument check by the following method (see Note 1):
 - a. Determine the piece of equipment in contact with the lowest mass fraction of detectable chemicals, within the distance at or below the standard detection sensitivity level.
 - b. Multiply the standard detection sensitivity level by the mass fraction of chemicals from the stream to determine the mass flow rate to be used in the daily instrument check using the following equation:

$$E_{DIC} = (E_{SDS}) \cdot \sum(X)$$

Where:

E_{DIC} = Mass flow rate for the daily instrument check (grams per hour)

E_{SDS} = Standard detection sensitivity level from Table 1 to Subpart A, (grams per hour)

X = Mass fraction of detectable chemical(s) seen by the optical gas imaging instrument, within the operating distance at or below the E_{SDS} .

4. Prior to the beginning of the monitoring survey, test the OGIC as follows:
 - a. Record ambient temperature as measured from an onsite temperature gauge or local weather station data reported via a public feed (e.g., weather.com).
 - b. Record wind speed as measured from a handheld anemometer or similar device.
 - c. Install a regulator on a gas cylinder containing a gas that is visible by the OGIC (e.g., methane). The regulator flow rate and gas cylinder composition shall be selected to represent the process stream(s) to be surveyed on that day. Place the cylinder in the area where the OGIC monitoring survey will take place or where similar environmental (wind, rain, etc.) conditions exist. If the wind speed increases noticeably during the monitoring survey, repeat the OGIC daily verification check. (See Note 2).
 - d. Set up the OGIC at a distance from the outlet of the cylinder regulator.

- e. Open the valve on the regulator to provide a mass flow rate that is no greater than the mass flow rate calculated in Step 3 while observing the gas flow through the OGIC.
- f. Gradually increase the distance between the OGIC and the outlet of the cylinder regulator and view the emission with the OGIC at each distance interval. The maximum distance where the emission is viewed by the OGIC for a minimum duration of 10 seconds is D_{Max} . Upon establishing D_{Max} , the OGIC daily verification check is complete.

Notes:

- 1) The calculation described in Step 3 may be performed once for all streams at the facility based on the heat and material balance (HMB) and need not be repeated for the daily instrument check. The results of the calculation described in Step 3 will be maintained.
- 2) Monitoring personnel may use a single regulator/cylinder composition combination for all process streams to be monitored with the hydrocarbon OGIC as long as the combination provides a mass flow rate that is no greater than the maximum flow rate calculated in Step 3 for all process streams to be monitored.

2.1.2 OGIC Use in Adverse Conditions

2.1.2.1 Wind

Wind speed is recorded during the OGIC daily verification check. If the wind speed within the survey area(s) has a Beaufort number of five or higher, the survey will be postponed in those areas until the wind speed has decreased. A wind speed chart is presented in Table 5-1.

Table 5.1 Wind speed Chart

Beaufort number	Wind (km/h)	Wind (mph)	Wind classification	Wind effects on land	Wind effects on water
0	<1	<1	Calm	Smoke rises vertically	Water calm, mirror-like
1	1-5	1-3	Light air	Smoke drift indicates wind direction; still wind vanes	Scale-like ripples with no foam crests
2	6-11	4-7	Light breeze	Leaves rustle; wind felt on face; wind vanes moved by wind	Small wavelets; crests have a glassy appearance and do not break
3	12-19	8-12	Gentle breeze	Leaves and twigs constantly moving; light flags extended	Large wavelets; crests begin to break, scattered whitecaps
4	20-29	13-18	Moderate breeze	Dust and loose paper raised; small branches move	Small waves 1-4' becoming longer; many whitecaps
5	30-38	19-24	Fresh breeze	Small trees with leaves begin to Sway	Moderate, longer waves 4-8'; whitecaps common; some spray
6	39-50	25-31	Strong breeze	Larger tree branches moving; phone lines whistle	Larger waves 8-13 whitecaps common; more spray
7	51-61	32-38	Near gale	Whole trees moving; difficult to walk against wind	Sea heaps up; waves 13-20'; crests break; white foam streaking off breakers

Beaufort number	Wind (km/h)	Wind (mph)	Wind classification	Wind effects on land	Wind effects on water
8	62-74	39-46	Gale	Twigs break off trees; difficult to walk against wind	Moderately high waves, 13-20', with greater lengths; crests beginning to break into foam blown in white streaks
9	75-86	47-54	Strong gale	Slight damage to buildings; shingles and slates torn off roofs	High waves of 20'; rolling seas; dense streaks of foam; spray may reduce visibility
10	87-101	55-63	Storm	Trees uprooted; considerable structural damage to buildings	Very high waves, 20-30', with overhanging crests; sea white with blown foam
11	102-115	64-72	Violent storm	Widespread damage	Huge waves, 30-45', foam patches cover sea; air filled with spray; visibility reduced
12	>115	>72	Hurricane	Widespread damage	Huge waves, over 45' air filled with foam; sea all white with driving spray; little visibility

2.1.2.2 Rain

The OGIC may be used in light rain as long as the OGIC daily verification check is performed in the same rain conditions. If conditions change, additional OGIC daily verification checks will be conducted prior to the survey.

2.1.2.3 Temperature

Monitoring personnel will record the ambient temperature during the OGIC daily verification check and will confirm that the temperature is within the acceptable operating range of the OGIC. In the unlikely event that temperature within the survey area falls outside of the acceptable operating range of the OGIC, the survey will be postponed until acceptable operating conditions exist.

2.1.3 Thermal Background

The ability to easily identify fugitive emissions using an OGIC decreases as the thermal energy differential between the fugitive emission and background decreases. Monitoring personnel will view components within the field of view using multiple camera angles and will select an angle that provides an adequate thermal background. During the survey, monitoring personnel will continuously perform a qualitative analysis of the thermal properties of the background to ensure that adequate thermal background is present. If monitoring personnel identify an area where questionable thermal background is present that may reduce the detection capabilities of the OGIC, one or both of the following procedures will be followed.

- 1) An additional OGIC verification check will be performed in the area of question to verify that adequate thermal background is present.
- 2) A temporary background (e.g., a person or other background) will be inserted into the scene(s) to create an adequate thermal background when feasible to increase the thermal energy differential between the fugitive emission and the background.

2.1.4 Handling Interferences

Monitoring personnel will be knowledgeable of the process streams typically present at a LNG facility and specifically present at the site being surveyed and will be able to identify sources of potential interference, such as steam. If potential interference is identified, monitoring personnel will utilize alternate viewing angles to differentiate between the component and potential interference source. In addition, monitoring personnel may utilize a secondary confirmation instrument (e.g., handheld gas detector or bubbles) to confirm the presence of hydrocarbons in the emissions of interest.

2.1.5 OGIC Operator Training and Experience

OGIC monitoring will be performed by personnel that are trained in the proper operation of the OGIC to be used in the survey and that have prior experience using OGICs for the purposes of identifying fugitive emissions. All OGIC operators will meet the minimum training requirements of 30 TAC 115.358(h).

2.1.6 OGIC Maintenance

Maintenance of the OGIC will be performed in accordance with manufacturer's recommendations. Records of maintenance, as applicable, will be maintained by the OGIC owner/operator.

OGICs are not calibrated like a traditional Method 21 gas analyzer. However, performance is verified as previously described on at least a daily basis when used for monitoring. If the OGIC malfunctions, it will be sent to the manufacturer for repair or replacement.

Date: August 15, 2019

Emission Sources - Maximum Allowable Emission Rates

Permit Number 100114 and N304

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)
LIQFLARE	Liquefaction Flare (Before construction of flare gas recovery and Train 4) (7)	NO _x	80.10	47.43
		NO _x (MSS)	6674.08	
		CO	318.99	188.91
		CO (MSS)	26580.25	
		SO ₂	0.71	0.34
		SO ₂ (MSS)	13.38	
		VOC	6.26	19.55
		VOC (MSS)	3538.79	
LIQFLARE	Liquefaction Flare (Before construction of Train 4 and after construction of flare gas recovery) (7)	NO _x	40.16	40.19
		NO _x (MSS)	6,634.15	
		CO	159.95	160.07
		CO (MSS)	26421.21	
		SO ₂	0.36	0.21
		SO ₂ (MSS)	13.03	
		VOC	3.15	18.41
		VOC (MSS)	3535.68	
LIQFLARE	Liquefaction Flare (After construction of Train 4 and flare gas recovery) (7)	NO _x	53.47	42.61
		NO _x (MSS)	6647.46	
		CO	212.96	169.68
		CO (MSS)	26474.23	
		SO ₂	0.47	0.25

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)	
			lbs/hour	TPY (5)
		SO ₂ (MSS)	13.15	
		VOC	4.19	18.79
		VOC (MSS)	3536.71	
		LIQFWP-1	Fire Water Pump 1	NO _x
		CO	0.85	0.04
		PM	0.10	<0.01
		PM ₁₀	0.10	<0.01
		PM _{2.5}	0.10	<0.01
		SO ₂	0.01	<0.01
		H ₂ SO ₄ (8)	<0.01	<0.01
		VOC	0.11	0.01
		LIQFWP-2	Fire Water Pump 2	NO _x
		CO	0.85	0.04
		PM	0.10	<0.01
		PM ₁₀	0.10	<0.01
		PM _{2.5}	0.10	<0.01
		SO ₂	0.01	<0.01
		H ₂ SO ₄ (8)	<0.01	<0.01
		VOC	0.11	0.01
		LIQFWP-3	Fire Water Pump 3	NO _x
		CO	0.85	0.04
		PM	0.10	<0.01
		PM ₁₀	0.10	<0.01
		PM _{2.5}	0.10	<0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)	
			lbs/hour	TPY (5)
		SO ₂	0.01	<0.01
		H ₂ SO ₄ (8)	<0.01	<0.01
		VOC	0.11	0.01
LIQEG-1	Emergency Generator 1 (DQFAH)	NO _x	1.38	0.03
		CO	2.00	0.05
		PM	0.05	<0.01
		PM ₁₀	0.05	<0.01
		PM _{2.5}	0.05	<0.01
		SO ₂	0.02	<0.01
		H ₂ SO ₄ (8)	<0.01	<0.01
		VOC	0.13	<0.01
		NH ₃	0.51	0.01
LIQEG-2	Emergency Generator 2 (DQFAH)	NO _x	1.38	0.03
		CO	2.00	0.05
		PM	0.05	<0.01
		PM ₁₀	0.05	<0.01
		PM _{2.5}	0.05	<0.01
		SO ₂	0.02	<0.01
		H ₂ SO ₄ (8)	<0.01	<0.01
		VOC	0.13	<0.01
		NH ₃	0.51	0.01
LIQEG-3	Emergency Generator 3 (DQFAH)	NO _x	1.38	0.03
		CO	2.00	0.05
		PM	0.05	<0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)	
			lbs/hour	TPY (5)
		PM ₁₀	0.05	<0.01
		PM _{2.5}	0.05	<0.01
		SO ₂	0.02	<0.01
		H ₂ SO ₄	<0.01	<0.01
		VOC	0.13	<0.01
		NH ₃	0.51	0.01
		LIQEG-4	Emergency Generator 4 (DQFAH)	NO _x
		CO	2.00	0.05
		PM	0.05	<0.01
		PM ₁₀	0.05	<0.01
		PM _{2.5}	0.05	<0.01
		SO ₂	0.02	<0.01
		H ₂ SO ₄ (8)	<0.01	<0.01
		VOC	0.13	<0.01
		NH ₃	0.51	0.01
		LIQEG-5	Emergency Generator – Guard House/Admin Area (DQDAA)	NO _x
		CO	0.79	0.02
		PM	0.04	<0.01
		PM ₁₀	0.04	<0.01
		PM _{2.5}	0.04	<0.01
		SO ₂	0.01	<0.01
		H ₂ SO ₄ (8)	<0.01	<0.01
		VOC	0.05	<0.01
LIQEG-6	Emergency Generator – Dock 2	NO _x	2.64	0.07

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)	
			lbs/hour	TPY (5)
(DSGAD)		CO	0.18	<0.01
		PM	0.02	<0.01
		PM ₁₀	0.02	<0.01
		PM _{2.5}	0.02	<0.01
		SO ₂	<0.01	<0.01
		H ₂ SO ₄ (8)	<0.01	<0.01
		VOC	0.02	<0.01
		LIQEG-7	Train 4 - Emergency Generator 4 (DQFAH)	NO _x
	CO	2.00		0.05
	PM	0.05		<0.01
	PM ₁₀	0.05		<0.01
	PM _{2.5}	0.05		<0.01
	SO ₂	0.02		<0.01
	H ₂ SO ₄ (8)	<0.01		<0.01
	VOC	0.13		<0.01
	NH ₃	0.51		0.01
LIQEAC-1	Emergency Air Compressor (QSX15)	NO _x	1.87	0.05
		CO	1.73	0.04
		PM	0.10	<0.01
		PM ₁₀	0.10	<0.01
		PM _{2.5}	0.10	<0.01
		SO ₂	0.01	<0.01
		H ₂ SO ₄ (8)	<0.01	<0.01
		VOC	0.10	<0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)	
			lbs/hour	TPY (5)
		NH ₃	0.06	<0.01
LIQEAC-2	Train 4 - Emergency Air Compressor (QSX15)	NO _x	1.87	0.05
		CO	1.73	0.04
		PM	0.10	<0.01
		PM ₁₀	0.10	<0.01
		PM _{2.5}	0.10	<0.01
		SO ₂	0.01	<0.01
		H ₂ SO ₄ (8)	<0.01	<0.01
		VOC	0.10	<0.01
		NH ₃	0.06	<0.01
LEGT-1	Emergency Generator Tank 1	VOC	0.01	<0.01
LEGT-2	Emergency Generator Tank 2	VOC	0.01	<0.01
LEGT-3	Emergency Generator Tank 3	VOC	0.01	<0.01
LEGT-4	Emergency Generator Tank 4	VOC	0.01	<0.01
LEGT-5	Emergency Generator Tank 5	VOC	0.01	<0.01
LEGT-6	Emergency Generator Tank 6	VOC	0.01	<0.01
LEGT-7	Emergency Generator Tank 7 – Train 4	VOC	0.01	<0.01
LEACT-1	Backup Air Compressor Tank 1	VOC	0.01	<0.01
LEACT-2	Backup Air Compressor Tank 2 - Train 4	VOC	0.01	<0.01
LFWPT-1	Diesel Firewater Tank 1	VOC	0.01	<0.01
LFWPT-2	Diesel Firewater Tank 2	VOC	0.01	<0.01
LFWPT-3	Diesel Firewater Tank 3	VOC	0.01	<0.01
FUG-LIQ123	Fugitives Train 1 – Train 3 (6)	VOC	1.14	5.00
		VOC (9)	1.16	5.10

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)	
			lbs/hour	TPY (5)
FUG-LIQ4	Fugitives Train 4 (6)	VOC	0.39	1.70
		VOC (9)	0.43	1.87
11K-30, 12K-30, 13K-30 14K-30 11K-31 12K-31 13K-31 14K-31 11K-32/11K-33 12K-32/12K-33 13K-32/13K-33 14K-32/14K-33	Propane Compressors Lube Oil Vent Propane Compressors Lube Oil Vent Propane Compressors Lube Oil Vent Propane Compressors Lube Oil Vent LP MR Compressors Lube Oil Vent MP/HP MR Compressor Lube Oil Vents MP/HP MR Compressor Lube Oil Vents MP/HP MR Compressor Lube Oil Vents MP/HP MR Compressor Lube Oil Vents	PM	0.03	0.11
		PM ₁₀	0.03	0.11
		PM _{2.5}	0.03	0.11
		VOC	<0.01	<0.01
MSS-FUG1-3	Fugitives - Train 1 - Train 3 Vessel Opening for Maintenance	VOC	29.27	0.04
MSS-FUG4	Fugitives - Train 4 Vessel Opening for Maintenance	VOC	29.27	0.01
ALL	All EPNs at the site	Individual HAP	---	<10
		Total HAPs	---	<25

- (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
- H₂SO₄ - sulfuric acid mist
- NH₃ - ammonia
- (4) Planned startup and shutdown (SS) lbs/hour emissions for all pollutants are authorized even if not specifically identified as SS.
- (5) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period. Annual emission rates for each source include planned SS emissions.
- (6) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (7) Only one Flare operating scenario is authorized at a time.

Emission Sources - Maximum Allowable Emission Rates

- (8) Sulfuric acid mist is a subset of $PM_{2.5}$ emissions.
- (9) Limit after the flare gas recovery has been installed.

Date: 12/19/25

Brooke J. Paup