

## **TCEQ AIR QUALITY PERMIT NUMBER 100114 and N304**

<b>APPLICATION BY</b>	<b>§</b>	<b>BEFORE THE</b>
<b>FREEPORT LNG DEVELOPMENT, L.P.</b>	<b>§</b>	
<b>FREEPORT LNG LIQUEFACTION</b>	<b>§</b>	<b>TEXAS COMMISSION ON</b>
<b>PLANT</b>	<b>§</b>	
<b>QUINTANA, BRAZORIA COUNTY</b>	<b>§</b>	<b>ENVIRONMENTAL QUALITY</b>

### **EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT**

The Executive Director of the Texas Commission on Environmental Quality (the commission or TCEQ) files this Response to Public Comment (Response) on the New Source Review Authorization application and Executive Director's preliminary decision.

As required by Title 30 Texas Administrative Code (TAC) § 55.156, before an application is approved, the Executive Director prepares a response to all timely, relevant and material, or significant comments. The Office of Chief Clerk received timely comments from the following persons: Environmental Integrity Project (on behalf of Citizens for Clean Air and Clean Water and Sierra Club). This Response addresses all timely public comments received, whether or not withdrawn. If you need more information about this permit application or the permitting process, please call the TCEQ Public Education Program at 1-800-687-4040. General information about the TCEQ can be found at our website at [www.tceq.texas.gov](http://www.tceq.texas.gov).

### **BACKGROUND**

#### Description of Facility

Freeport LNG Development, L.P. (Applicant) has applied to the TCEQ for a New Source Review Authorization under Texas Clean Air Act (TCAA) § 382.0518. This will authorize the modification of an existing facility that may emit air contaminants.

This permit will authorize the Applicant to modify the Freeport LNG Liquefaction Plant. The facility is located at 1500 Lamar Street, Quintana, Brazoria County. Contaminants authorized under this permit include carbon monoxide (CO), hazardous air pollutants, hydrogen sulfide (H<sub>2</sub>S), nitrogen oxides (NO<sub>x</sub>), organic compounds, particulate matter including particulate matter with diameters of 10 microns or less (PM<sub>10</sub>) and 2.5 microns or less (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), and sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) mist.

#### **Procedural Background**

Before work begins on the modification of an existing facility that may emit air contaminants, the person planning the modification must obtain a permit amendment from the commission. This permit application is for a permit amendment of Air Quality Permit Number 100114 and an issuance of N304.

The permit application was received on August 9, 2022, and declared administratively complete on August 17, 2022. The Notice of Receipt and Intent to Obtain an Air Quality Permit (NORI, first public notice) for this permit application was published in English on August 31, 2022, in *The Facts*, and in Spanish on September 1, 2022, in *La Voz*. The Notice of Application and Preliminary Decision for an Air Quality Permit (NAPD, second public notice) was published on May 13, 2025, in English in *The Facts*, and in Spanish on May 13, 2025, also in *The Facts*. The Applicant published NORI in

Spanish in *La Voz*, but because *La Voz* does not meet the criteria to be considered a Spanish language newspaper and no other Spanish language newspaper circulating in the county could be found, the Applicant published NAPD in English in *The Facts* and in Spanish in *The Facts*. Both English and Spanish notices were available on the commission's website at <https://www.tceq.texas.gov/permitting/air/newsourcereview/airpermits-pendingpermit-apps>. Because this application was received after September 1, 2015, it is subject to the procedural requirements of and rules implementing Senate Bill 709 (84th Legislature, 2015).

## COMMENTS AND RESPONSES

### **COMMENT 1: Health Effects/Air Quality/Cumulative Emissions**

Commentors are concerned that the proposed emissions will threaten the health and safety of nearby residents and that the proposed emissions will cause or contribute to exceedances of National Ambient Air Quality Standards (NAAQS). Commentors questioned whether Freeport LNG's air quality analysis is flawed. Commentors questioned whether Freeport LNG and TCEQ adequately considered cumulative impacts of air pollution. Commentors raised concerns about whether the proposed emissions will cause nuisance conditions violating 30 Tex. Admin. Code § 101.4.

(Environmental Integrity Project (on behalf of Citizens for Clean Air and Clean Water and Sierra Club)

**RESPONSE 1:** The Executive Director is required to review permit applications to ensure they will be protective of human health and the environment. For this type of air permit application, potential impacts to human health and welfare or the environment are determined by comparing the Applicant's proposed air emissions to appropriate state and federal standards and guidelines. These standards and guidelines include the National Ambient Air Quality Standards (NAAQS), TCEQ Effects Screening Levels (ESLs), and TCEQ rules. As described in detail below, the Executive Director determined that the emissions authorized by this permit are protective of both human health and welfare and the environment.

### **NAAQS**

The U.S. Environmental Protection Agency (EPA) created and continues to evaluate the NAAQS, which include both primary and secondary standards, for pollutants considered harmful to public health and the environment.<sup>1</sup> Primary standards protect public health, including sensitive members of the population such as children, the elderly, and those individuals with preexisting health conditions. Secondary NAAQS protect public welfare and the environment, including animals, crops, vegetation, visibility, and buildings, from any known or anticipated adverse effects from air contaminants. The EPA has set NAAQS for criteria pollutants, which include carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter less than or equal to 10 microns in aerodynamic diameter (PM<sub>10</sub>), and PM less than or equal to 2.5 microns in aerodynamic diameter (PM<sub>2.5</sub>).

The Applicant conducted a NAAQS analysis for (CO, NO<sub>2</sub>, and SO<sub>2</sub>). The first step of the NAAQS analysis is to compare the proposed modeled emissions against the

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<sup>1</sup> 40 CFR § 50.2

established de minimis level. Predicted concentrations (GLCmax)<sup>2</sup> below the de minimis level are considered to be so low that they do not require further NAAQS analysis. Table 1 contains the results of the de minimis analysis.

**Table 1. Modeling Results for De Minimis Review**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	De Minimis (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	0.99	7.8
SO <sub>2</sub>	3-hr	0.75	25
NO <sub>2</sub>	1-hr	14	7.5
NO <sub>2</sub>	Annual	0.2	1
CO	1-hr	121	2000
CO	8-hr	79	500

The pollutants below the de minimis level should not cause or contribute to a violation of the NAAQS and are protective of human health and the environment.

The Applicant conducted a full NAAQS analysis for those pollutants above de minimis to account for cumulative effects by including an evaluation of all on-property sources, applicable off-property sources, and representative monitored background concentrations. Results of the NAAQS analysis are presented below in Table 2. The total concentration was determined by adding the GLCmax to the appropriate background concentration. Background concentrations are obtained from ambient air monitors across the state and are added to the modeled concentration (both on-property and off-property sources) to account for sources not explicitly modeled. The ambient air monitors were selected to ensure that they are representative of the proposed site. The total concentration was then compared to the NAAQS to ensure that the concentration is below the standard. For any subsequent projects submitted pertaining to this or any other facility in the area, the air quality analysis for that project will have to include the emissions authorized by this project, as well as other applicable off-property sources, if a full impacts analysis is required.

**Table 2. Total Concentrations for NSR NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	Total Conc. = [Background + GLCmax] (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
NO <sub>2</sub>	1-hr	120	25	145	188

<sup>2</sup> The GLCmax is the maximum ground level concentration predicted by the modeling.

The NAAQS analysis results are below the standard for each pollutant, should not cause or contribute to violation of the NAAQS, and are protective of human health and the environment.

### Effects Screening Levels

ESLs are specific guideline concentrations used in TCEQ's evaluation of certain pollutants. These guidelines are derived by the TCEQ's Toxicology Division and are based on a pollutant's potential to cause adverse health effects, odor nuisances, and effects on vegetation. Health-based ESLs are set below levels reported to produce adverse health effects, and are set to protect the general public, including sensitive subgroups such as children, the elderly, or people with existing respiratory conditions. TCEQ's Toxicology Division specifically considers the possibility of cumulative and aggregate exposure when developing the ESL values that are used in air permitting, creating an additional margin of safety that accounts for potential cumulative and aggregate impacts. Adverse health or welfare effects are not expected to occur if the air concentration of a pollutant is below its respective ESL. If the air concentration of a pollutant is above the screening level, it is not necessarily indicative that an adverse effect will occur, but rather that further evaluation is warranted.

The Applicant conducted a health effects analysis using the Modeling and Effects Review Applicability (MERA) guidance.<sup>3</sup> The MERA is a tool to evaluate impacts of non-criteria pollutants. It is a step-by-step process, evaluated on a chemical species by chemical species basis, in which the potential health effects are evaluated against the ESL for the chemical species. The initial steps are simple and conservative, and as the review progresses through the process, the steps require more detail and result in a more refined (less conservative) analysis. If the contaminant meets the criteria of a step, the review of human health and welfare effects for that chemical species is complete and is said to "fall out" of the MERA process at that step because it is protective of human health and welfare. All pollutants satisfy the MERA criteria and therefore are not expected to cause adverse health effects, except for twelve pollutants.

The following pollutants did not meet the criteria of the MERA guidance document and required further analysis. Site-wide modeling was performed and demonstrated that the predicted concentrations will not exceed the ESL (Table 4 below).

**Table 3. Health Effects Modeling Results**

Pollutant	CAS#	Averaging Time	GLCmax (µg/m <sup>3</sup> )	10% ESL (µg/m <sup>3</sup> )
isobutane	75-28-5	1-hr	19.71	2300
isobutane	75-28-5	Annual	0.03	710
n-butane	106-97-8	1-hr	1.23	6600
n-butane	106-97-8	Annual	0.02	710

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<sup>3</sup> See APDG 5874 guidance document.

Pollutant	CAS#	Averaging Time	GLCmax (µg/m³)	10% ESL (µg/m³)
isopentane	78-78-4	1-hr	2.41	5900
isopentane	78-78-4	Annual	0.01	710
n-pentane	109-66-0	1-hr	0.05	5900
n-pentane	109-66-0	Annual	0.003	710
n-hexane	110-54-3	1-hr	0.01	560
n-hexane	110-54-3	Annual	0.001	20
n-octane	111-65-9	1-hr	0.0004	560
n-octane	111-65-9	Annual	0.00002	54
ethylene	74-85-1	Annual	0.58	3.4
methyl mercaptan	74-93-1	1-hr	0.001	0.19
methyl mercaptan	74-93-1	Annual	0.0001	0.1
mercaptan, not otherwise specified	NA	1-hr	0.002	1.8
mercaptan, not otherwise specified	NA	Annual	0.0001	0.18
benzene	71-43-2	1-hr	0.03	17
benzene	71-43-2	Annual	0.00002	0.45
xylene	1330-20-7	1-hr	0.0002	220
xylene	1330-20-7	Annual	0.00001	18

**Table 4. Minor NSR Site-wide Modeling Results for Health Effects**

Pollutant	CAS#	Averaging Time	GLCmax (µg/m³)	ESL (µg/m³)
ethylene	74-85-1	1-hr	1116	1400

State Property Line Analysis (30 TAC Chapter 112)

Because this application has sulfur emissions, the Applicant conducted a state property line analysis to demonstrate compliance with TCEQ rules for net ground-level concentrations for sulfur dioxide (SO<sub>2</sub>), hydrogen sulfide (H<sub>2</sub>S), and sulfuric acid

(H<sub>2</sub>SO<sub>4</sub>), as applicable. This analysis demonstrated that resulting air concentrations will not exceed the applicable state standard.

In summary, based on the Executive Director's staff review, it is not expected that existing health conditions will worsen, or that there will be adverse health effects on the general public, sensitive subgroups, or the public welfare and the environment as a result of proposed emission rates associated with this project.

**COMMENT 2: Best Available Control Technology and Lowest Achievable Emission Rate**

Commenters asked whether the emission sources will utilize pollution control technology reflecting use of Best Available Control Technology or Lowest Achievable Emissions Rate.

(Environmental Integrity Project (on behalf of Citizens for Clean Air and Clean Water and Sierra Club)

**RESPONSE 2:** The TCAA and TCEQ rules require an evaluation of air quality permit applications to determine whether adverse effects to public health, general welfare, or physical property are expected to result from a facility's proposed emissions. As part of the evaluation of applications for new or amended permits, the permit reviewer audits all sources of air contaminants at the proposed facility and assures that the facility will be using the best available control technology (BACT) applicable for the sources and types of contaminants emitted. The BACT is based upon control measures that are designed to minimize the level of emissions from specific sources at a facility. Applying BACT results in requiring technology that best controls air emissions with consideration given to the technical practicability and economic reasonableness of reducing or eliminating emissions. *See* TCAA § 382.0518; 30 TAC § 116.111. BACT may be numerical limitations, the use of add-on control technology, design considerations, the implementation of work practices, or operational limitations.

TCEQ's BACT evaluation is conducted using a "tiered" analysis approach. The evaluation begins at the first tier and continues sequentially through subsequent tiers only, if necessary, as determined by the evaluation process described in this document. In each tier, BACT is evaluated on a case-by-case basis for technical practicability and economic reasonableness. The three tiers are described in the following:

- **Tier I:** Emission reduction performance levels accepted as BACT in recent permit reviews for the same process and/or industry continue to be acceptable.
- **Tier II:** Tier II BACT evaluation involves consideration of controls that have been accepted as BACT in recent permits for similar air emission streams in a different process or industry. For example, an applicant may propose to control volatile organic compound (VOC) emissions in one industry using technology already in use in another industry. A Tier II evaluation includes issues relating to stream comparison and possible differences in overall performance of a particular emission reduction option. In addition, the Tier II evaluation considers technical differences between the processes or industries in question. To demonstrate technical practicability, detailed technical analysis may be required to assess the cross-applicability of

emission reduction options. In Tier II, economic reasonableness is established by historical and current practice.

- **Tier III:** A Tier III BACT evaluation is a detailed technical and quantitative economic analysis of all emission reduction options available for the process under review and is similar to EPA's top-down approach. Technical practicability is established through demonstrated success of an emission reduction option based on previous use, or engineering evaluation of a new technology. Economic reasonableness is determined solely by the cost-effectiveness of controlling emissions (dollars per ton of pollutant reduced) and does not consider the effect of emission reduction costs on corporate economics.

Freeport LNG will use good combustion practices while operating the flare to limit NO<sub>x</sub> emissions to meet the Lowest Achievable Emission Rate (LAER.) NO<sub>x</sub> emissions from the flare are based on TCEQ's factors for high-British thermal unit (Btu) streams, based on flare stream characteristics. The permit reviewer evaluated the proposed BACT and confirmed it to be acceptable.

Nonattainment permits must include LAER, as opposed to BACT. LAER is usually more stringent than BACT. For new major sources and major modifications in nonattainment areas, LAER is the most stringent emission limitation derived from either of the following: the most stringent emission limitation contained in the implementation plan of any state for such class or category of source; or the most stringent emission limitation achieved in practice by such class or category of source.

The LAER review takes technical feasibility into account, but not economic reasonableness, which is considered in a BACT analysis. Several technological considerations are involved in selecting LAER. The LAER is an emission rate specific to each emissions unit, including fugitive emission sources. The emission rate may result from a combination of emission-limiting measures such as a change in the raw material processed, a process modification, and add-on controls. A single control measure may be appropriate for LAER, or a combination of emission-limiting techniques may be considered. Unlike BACT, the LAER requirement does not consider economic, energy, or other environmental factors.

Freeport LNG will use good combustion practices while operating the flare to limit NO<sub>x</sub> emissions to meet LAER. NO<sub>x</sub> emissions from the flare are based on TCEQ's factors for high-British thermal unit (Btu) streams, based on flare stream characteristics. The flare meets the design and operating requirements of the Alternate Methods of Control (AMOC) Permit AMOC71 and the TCEQ regulatory requirements in 30 TAC 111. The flare is equipped with a flow monitor and continuous emissions analyzer to ensure compliance with these requirements. Based on an updated query of the RACT/BACT/LAER Clearinghouse (RBLC) database, permits, and other regulatory requirements (such as the California Air Resources Board (CARB) determinations and California air district rules) for similar flare operations, the operating practices and compliance with applicable regulatory requirements meet LAER.

LAER for NO<sub>x</sub> from emergency engines is determined to be compliance with the U.S. EPA's Tier certification emission standards, application of selective catalytic reduction (SCRs), use of ultra-low sulfur diesel fuel (< 15 ppmv sulfur content), compliance with the New Source Performance Standards (NSPS) Subpart III, and limiting hours of

operation to < 100 hr/yr of non-emergency operations. LAER for VOC is determined to be compliance with Tier certification standards, use of ultra-low sulfur diesel fuel (< 15 ppmv sulfur content), compliance with NSPS Subpart IIII, limit hours of operation to < 100 hr/yr of non-emergency operations.

28LAER LDAR program requirements for the fugitive emissions are considered more stringent, this program will be implemented for the Trains 1-3 fugitive components along with previously approved alternative work practice (AWP) to the Method 21 monitoring requirements monitoring is performed on a bi-monthly basis using optical gas imaging (OGI) technology and on an annual basis using Method 21. Therefore, the use of the AWP is considered equivalent to the Method 21 LDAR requirements and is therefore proposed as LAER for the Liquefaction Trains 1-3 fugitive emissions.

For storage tanks, LAER for VOC is determined to be fixed roof tanks and good operating practices. The Trains 1-3 construction project includes lube oil vents associated with compressor systems. VOC emissions from these vents are under 0.00002 tons per year. Based on this insignificant level of emissions, LAER for VOC is proposed to be proper operation and maintenance of the associated compressors.

LAER for the vessel opening is determined to be the following:

- minimizing the number and duration of planned maintenance, startup, and shutdown (MSS) events;
- MSS activities associated with large emissions from equipment containing materials with vapor pressures above 0.5 psia will be routed to the flare;
- Process equipment will only be opened for inspection and maintenance after purging to the flare to minimize VOC content down to 10,000 ppmv or 10% of the lower explosive level (LEL);
- and the use of knockout drums to separate liquids and vapors

### **COMMENT 3: Emission Rates and Calculations**

Commentors questioned whether the emissions calculation methodologies used in the application are flawed or outdated.

(Environmental Integrity Project (on behalf of Citizens for Clean Air and Clean Water and Sierra Club)

**RESPONSE 3:** Emissions from this facility were determined by using the methods detailed below. The Applicant represented the appropriate methodologies to control and minimize emissions and utilized corresponding control efficiencies when calculating the emission rates. As provided in 30 TAC § 116.116(a), the Applicant is bound by these representations, including the represented performance characteristics of the control equipment. In addition, the permit holder must operate within the limits of the permit, including the emission limits as listed in the Maximum Allowable Emissions Rate Table (MAERT).

The ground flare VOC emission rates are based on the flow rate of VOCs and other non-VOC hydrocarbons (e.g., methane) and a minimum destruction efficiency of 99.5% Destruction and Removal Efficiency (DRE) for all VOC compounds in the vapor emissions routed to it. CO and NO<sub>x</sub> emissions are based on TCEQ's flare emission factors, which are based on the heating value of the flared gas.



Fugitive emissions of VOCs are calculated using the methodology provided in the TCEQ Fugitive Calculations Workbook, which is based on 30 TAC Chapter 115 and 28LAER LDAR requirements and an approved Optical Gas Imaging (OGI) monitoring alternative.

**COMMENT 4: Project and Site Aggregation**

Commentors raised concerns that Freeport LNG failed to aggregate all the emissions covered by Permit 100114. Commentors note that Freeport LNG evaluated whether the application crossed the major modification threshold for the Liquefaction Trains 1-3 emissions and Liquefaction Train 4 emissions separately and state that there is no basis for evaluating them as independent projects. Commentors also state that the project should be aggregated with Freeport LNG's pending project 346088 to increase emissions at its Pretreatment Plant. Commentors state that because the pending projects at the Pretreatment Plant and Liquefaction Plant are substantially related, they must be aggregated when determining major New Source Review applicability.

(Environmental Integrity Project (on behalf of Citizens for Clean Air and Clean Water and Sierra Club)

**RESPONSE 4:** This amendment involves two separate projects (for federal applicability purposes). The first projects are identified as, "Liquefaction Trains 1-3," and the second project is identified as, "Liquefaction Train 4."

As defined using EPA's "substantially related" test, new, modified, or affected facilities involved in a permitting action are generally referred to as a "project." 83 FR 57324 (15 Nov. 2018) provides guidance on when physical or operational changes should be combined into a single "project," or aggregated, for analysis of major NSR applicability.

This amendment is a retrospective review of the original three trains, a retrospective review of the unconstructed Liquefaction Train 4, and authorization of a flare gas recovery project. Liquefaction Trains 1-3 were initially authorized in Permit No. 100114 issued July 16, 2014, and began construction on February 15, 2015. Train 4 was initially authorized in amended Permit No. 104840 issued April 25, 2018. Train 4 project was conservatively aggregated with the Trains 1-3 project at time it was authorized resulting in nonattainment new source review (NNSR) Review for the Pretreatment Trains 1-4. Train 4 has only performed limited construction activities to support additional geotechnical engineering and does not anticipate commencement of full-scale construction until early 2023 with operations likely in 2027, approximately 7 years after commencement of operation of Train 3. Because of this, Train 4 has taken on the form of a true incremental project to the original three-train project.

Since the proposed changes included in this application, except for the flare gas recovery project, are considered retrospective changes associated with the initial authorization of each emission unit, emissions from Liquefaction Trains 1-3 will be reviewed as if the site were greenfield (i.e., in the context of being initially permitted at these levels). Emissions from Liquefaction Train 4 will be evaluated as a separate addition to the site. The proposed flare gas recovery project is being evaluated as a separate project, and results in hourly and annual emission rate decreases.

The Pretreatment Plant and Liquefaction Plant are considered separate sites. The definition of "site" in 30 TAC 122.10(27) is, "[t]he total of all stationary sources located on one or more contiguous or adjacent properties, which are under common control of

the same person (or persons under common control). A research and development operation and a collocated manufacturing facility shall be considered a single site if they each have the same two-digit Major Group Standard Industrial Classification code (as described in the Standard Industrial Classification Manual, 1987) or the research and development operation is a support facility for the manufacturing facility.” The Pretreatment Plant and the Liquefaction Plant are not located on contiguous or adjacent properties, and are therefore not considered a single site. Projects at separate sites are not required to be aggregated for federal applicability purposes.

**COMMENT 5: PSD Review Applicability**

Commentors questioned whether the proposed emissions will exceed allowable Prevention of Significant Deterioration Increments.

(Environmental Integrity Project (on behalf of Citizens for Clean Air and Clean Water and Sierra Club)

**RESPONSE 5:** A Prevention of Significant Deterioration (PSD) major site is defined as a site emitting over 250 tpy of any one pollutant if it is an unnamed source or 100 tpy of any one pollutant if it is one of 28 sources named in 40 CFR § 52.21(b)(1)(a). Once it is determined a site is major, the project emission increases for each pollutant are compared to the applicable significant emission rate to determine if that pollutant requires PSD review. Because this site is not a named source and has proposed emission rates less than 250 tpy of each pollutant, the project is not subject to PSD permitting.

**COMMENT 6: “As-built” Amendment**

Commentors raised concerns that Freeport LNG did not properly evaluate the application as an “as-built” amendment and failed to perform the required analyses for pollutants that are over their respective “significance” levels as opposed to those that have crossed the applicable “major” threshold. Because Freeport LNG uniformly failed to appropriately determine whether its emissions are subject to NNSR and PSD requirements, the Application must be denied.

(Environmental Integrity Project (on behalf of Citizens for Clean Air and Clean Water and Sierra Club)

**RESPONSE 6:** This amendment involves two separate projects (for federal applicability purposes), Liquefaction Trains 1-3, and Liquefaction Train 4. Each of these projects is a separate retrospective review, or “as-built” amendment of the original project. Changes made to Liquefaction Trains 1-3 are a separate project than the changes made to Liquefaction Train 4. Each project evaluated retrospectively is below the PSD thresholds for the respective project. Each project was also reviewed retrospectively with the major source threshold of 25 tpy for NO<sub>x</sub> and VOCs for a severe nonattainment area under the previous 1997 8-hour ozone standard. The Liquefaction Train 1-3 project is subject to NNSR permitting requirements for NO<sub>x</sub>. See Response 4 regarding Project Aggregation and Response 5 regarding PSD Review Applicability.

**COMMENT 7: Offsets**

Commentors questioned whether Freeport LNG adequately offset nitrogen oxides and volatile organic compounds.

(Environmental Integrity Project (on behalf of Citizens for Clean Air and Clean Water and Sierra Club)

**RESPONSE 7:** The site is located in Brazoria County, which has been designated as a serious nonattainment area for ozone. For the Houston-Galveston-Brazoria nonattainment area, designated "severe" nonattainment under the 1997 8-hour ozone standard, the retroactive analysis of this project would require permit offsets at the rate of 1:3 to 1.0 for NO<sub>x</sub> emissions.

The permit requires 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.

The permit holder is required to use 53.4 tons per year (tpy) of NO<sub>x</sub> emission reduction credits from TCEQ credit certificate numbers 3991, 4044, 4050, 4051, 4052, 4053, 4054, and 4163 to offset the 41.02 tpy NO<sub>x</sub> project emission increase for the facilities authorized by this permit at a ratio of 1.3 to 1.0.

The permit holder is required to use 32.1 tpy of VOC emission reduction 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. Prior to the start of operation of the flare gas recovery project (an emissions reduction project), the permit holder is required to use 9.4 tpy of NO<sub>x</sub> credits to offset the 7.24 tpy NO<sub>x</sub> project emission increase for the facilities authorized by this permit at a ratio of 1.3 to 1.0.

Prior to the commencement of operation, the permit holder is required to 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.

**COMMENT 8: Demonstrate Compliance with Permit**

Commentors questioned whether proposed air monitoring and reporting requirements are adequate to ensure compliance with the Clean Air Act and protect local residents.

(Environmental Integrity Project (on behalf of Citizens for Clean Air and Clean Water and Sierra Club)

**RESPONSE 8:** Special conditions have been included as part of the proposed permit to ensure the Applicant can demonstrate compliance with the emission limitations set forth in the permit. Emissions from the flare are required to be monitored through continuous flow rate and Btu content of the waste gas monitoring. The fugitive emissions will be monitored through the 28LAER LDAR program or OGI monitoring. The permit holder is also required to maintain records to demonstrate compliance, including the monitoring listed above. Records must be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction. The TCEQ Houston Regional Office may perform investigations of the plant as required. The investigation may include an inspection of the site including all equipment, control devices, monitors, and a review of all calculations and required recordkeeping.

**COMMENT 9: Environmental Justice**

Commentors raised concerns questioning whether TCEQ adequately addressed environmental justice concerns and complied with Title VI of the Civil Rights Act in reaching the preliminary decision to issue this permit.

(Environmental Integrity Project (on behalf of Citizens for Clean Air and Clean Water and Sierra Club)

**RESPONSE 9:** Air permits evaluated by TCEQ are reviewed without reference to the socioeconomic or racial status of the surrounding community. TCEQ is committed to protecting the health of the people of Texas and the environment regardless of location. A health effects review was conducted for the proposed facilities during the permit review and the permit was found to be protective of human health and the environment. TCEQ encourages participation in the permitting process. The Office of the Chief Clerk works to help the public and neighborhood groups participate in the regulatory process to ensure that agency programs that may affect human health or the environment operate without discrimination and to make sure that concerns are considered thoroughly and are handled in a way that is fair to all. You may contact the Office of the Chief Clerk at 512-239-3300 for further information. More information may be found on TCEQ website: [Title VI Compliance at TCEQ - Texas Commission on Environmental Quality - www.tceq.texas.gov](http://www.tceq.texas.gov).

**CHANGES MADE IN RESPONSE TO COMMENT**

No changes to the draft permit have been made in response to public comment.

Respectfully submitted,

Texas Commission on Environmental Quality

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REPRESENTING THE  
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