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Emily Lindley, *Commissioner*
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Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 24, 2021

TO: Persons on the attached mailing list.

RE: Port Arthur LNG, LLC
Permit Nos. 158420, PSDTX1572 and GHGPSDTX198

Decision of the Executive Director.

The executive director has made a decision that the above-referenced permit application meets the requirements of applicable law. **This decision does not authorize construction or operation of any proposed facilities.** This decision will be considered by the commissioners at a regularly scheduled public meeting before any action is taken on this application unless all requests for contested case hearing or reconsideration have been withdrawn before that meeting.

Enclosed with this letter is a copy of the Executive Director's Response to Comments. A copy of the complete application, draft permit and related documents, including public comments, are available for review at the TCEQ Central Office. A copy of the complete application, the draft permit, and executive director's preliminary decision are available for viewing and copying at the TCEQ central office, the TCEQ Beaumont regional office, and at the Effie & Wilton Hebert Public Library, 2025 Merriman Street, Port Neches, Jefferson County, Texas. The facility's compliance file, if any exists, is available for public review at the TCEQ Beaumont Regional Office, 3870 Eastex Freeway, Beaumont, Texas.

If you disagree with the executive director's decision, and you believe you are an "affected person" as defined below, you may request a contested case hearing. In addition, anyone may request reconsideration of the executive director's decision. The procedures for the commission's evaluation of hearing requests/requests for reconsideration are located in 30 Texas Administrative Code Chapter 55, Subchapter F. A brief description of the procedures for these two types of requests follows.

How to Request a Contested Case Hearing.

It is important that your request include all the information that supports your right to a contested case hearing. You must demonstrate that you meet the applicable legal requirements to have your hearing request granted. The commission's consideration of your request will be based on the information you provide.

The request must include the following:

- (1) Your name, address, daytime telephone number, and, if possible, a fax number.
- (2) If the request is made by a group or association, the request must identify:
 - (A) one person by name, address, daytime telephone number, and, if possible, the fax number, of the person who will be responsible for receiving all communications and documents for the group;
 - (B) the comments on the application submitted by the group that are the basis of the hearing request; and
 - (C) by name and physical address one or more members of the group that would otherwise have standing to request a hearing in their own right. The interests the group seeks to protect must relate to the organization's purpose. Neither the claim asserted nor the relief requested must require the participation of the individual members in the case.
- (3) The name of the applicant, the permit number and other numbers listed above so that your request may be processed properly.
- (4) A statement clearly expressing that you are requesting a contested case hearing. For example, the following statement would be sufficient: "I request a contested case hearing."

Your request must demonstrate that you are an **"affected person."** An affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. Your request must describe how and why you would be adversely affected by the proposed facility or activity in a manner not common to the general public. For example, to the extent your request is based on these concerns, you should describe the likely impact on your health, safety, or uses of your property which may be adversely affected by the proposed facility or activities. To demonstrate that you have a personal justiciable interest, you must state, as specifically as you are able, your location and the distance between your location and the proposed facility or activities. A person who may be affected by emissions of air contaminants from the facility is entitled to request a contested case hearing.

Your request must raise disputed issues of fact that are relevant and material to the commission's decision on this application that were raised **by you** during the public comment period. The request cannot be based solely on issues raised in comments that you have withdrawn.

To facilitate the commission's determination of the number and scope of issues to be referred to hearing, you should: 1) specify any of the executive director's responses to **your** comments that you dispute; 2) the factual basis of the dispute; and 3) list any disputed issues of law.

How to Request Reconsideration of the Executive Director's Decision.

Unlike a request for a contested case hearing, anyone may request reconsideration of the executive director's decision. A request for reconsideration should contain your name, address, daytime phone number, and, if possible, your fax number. The request must state that you are requesting reconsideration of the executive director's decision, and must explain why you believe the decision should be reconsidered.

Deadline for Submitting Requests.

A request for a contested case hearing or reconsideration of the executive director's decision must be **received by** the Chief Clerk's office no later than **30 calendar days** after the date of this letter. You may submit your request electronically at www.tceq.texas.gov/agency/decisions/cc/comments.html or by mail to the following address:

Laurie Gharis, Chief Clerk
TCEQ, MC-105
P.O. Box 13087
Austin, Texas 78711-3087

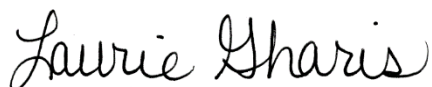
Processing of Requests.

Timely requests for a contested case hearing or for reconsideration of the executive director's decision will be referred to the TCEQ's Alternative Dispute Resolution Program and set on the agenda of one of the commission's regularly scheduled meetings. Additional instructions explaining these procedures will be sent to the attached mailing list when this meeting has been scheduled.

How to Obtain Additional Information.

If you have any questions or need additional information about the procedures described in this letter, please call the Public Participation and Education Program, toll free, at 1-800-687-4040.

Sincerely,



Laurie Gharis
Chief Clerk

LG/mo

Enclosure

MAILING LIST
for
Port Arthur LNG, LLC
Permit Nos. 158420, PSDTX1572 and GHGPSDTX198

FOR THE APPLICANT:

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Kerry Higgins, Senior Director
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INTERESTED PERSONS:

See attached list.

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via electronic mail:

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TCEQ AIR QUALITY PERMIT NUMBERS 158420, PSDTX1572, and GHGPSDTX198

APPLICATION BY	§	BEFORE THE
PORT ARTHUR LNG, LLC	§	TEXAS COMMISSION ON
PORT ARTHUR LNG	§	ENVIRONMENTAL QUALITY
PORT ARTHUR, JEFFERSON COUNTY	§	

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 the Chief Clerk received timely comments from the following persons: John Beard, Amy Catherine Dinn (on behalf of Port Arthur Community Action Network), and Chase Porter (on behalf of Port Arthur Community Action Network).

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.

BACKGROUND

Description of Facility

Port Arthur LNG, LLC (Applicant) has applied to the TCEQ for a New Source Review Authorization under Texas Clean Air Act (TCAA) § 382.0518. This will authorize the construction of a new facility that may emit air contaminants.

This permit will authorize the Applicant to construct the Port Arthur LNG (PALNG) plant. The plant is located at the following driving directions: from the intersection of TX 82 and TX 87 in Port Arthur, travel south on TX 87 for 5.3 miles to Oil Field Road, turn right, and Port Arthur LNG is on the left, Port Arthur, Jefferson County, Texas 77642. Contaminants authorized under this permit include ammonia, carbon monoxide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, sulfur dioxide, sulfuric acid mist, and greenhouse gases.

Procedural Background

Before work is begun on the construction of a new facility that may emit air contaminants, the person planning the construction must obtain a permit from the commission. This permit application is for an initial issuance of Air Quality Permit Numbers 158420, PSDTX1572, and GHGPSDTX198.

The permit application was received on September 12, 2019 and declared administratively complete on September 26, 2019. The Notice of Receipt and Intent to Obtain an Air Quality Permit (first public notice) for this permit application was published in English on October 9, 2019, in *The News*, and in Spanish on October 13, 2019, in *El Perico*. The Notice of Application and Preliminary Decision for an Air Quality Permit (second public notice) was published on June 17, 2020, in English in *The News* and in Spanish on June 21, 2020, in *El Perico*. A public meeting was held on September 15, 2020 utilizing the GoToMeeting platform. The public comment period ended on September 15, 2020. 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

Commenters are concerned about the effect of the emissions from the proposed project on the air quality and health of people, particularly sensitive populations such as the elderly, children, and people with existing medical conditions, such as cancer, heart disease, lung disease, and kidney disease. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network] and John Beard)

Amy Catherine Dinn and Chase Porter expressed concern regarding adverse health effects of Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOCs). In addition, they asked if the Air Quality Analysis (AQA) is flawed.

John Beard is concerned about the effects of VOCs, sulfur dioxide, nitrous oxides, and other compounds on vulnerable populations, which he says are hypersensitized.

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.¹ 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

¹ 40 CFR 50.2

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 (NO₂), ozone (O₃), sulfur dioxide (SO₂), particulate matter less than or equal to 10 microns in aerodynamic diameter (PM₁₀), and PM less than or equal to 2.5 microns in aerodynamic diameter (PM_{2.5}).

The Applicant conducted a NAAQS analysis for CO, NO₂, O₃, SO₂, PM, PM₁₀, and PM_{2.5} as part of the AQA. The first step of the NAAQS analysis is to compare the proposed modeled emissions against the established de minimis level. Predicted concentrations (GLCmax²) 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 ³)	De Minimis (µg/m ³)
NO ₂	1-hr	16	7.5
NO ₂	Annual	0.96	1
CO	1-hr	1874	2000
CO	8-hr	186	500
PM ₁₀	24-hr	2	5
PM ₁₀	Annual	0.2	1
PM _{2.5}	24-hr	1.3	1.2
PM _{2.5}	Annual	0.16	0.2
SO ₂	1-hr	5.2	7.8
SO ₂	3-hr	5	25
SO ₂	24-hr	2	5
SO ₂	Annual	0.05	1

² The GLCmax is the maximum ground level concentration predicted by the modeling.

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 ³)	Background (µg/m ³)	Total Conc. = [Background + GLCmax] (µg/m ³)	Standard (µg/m ³)
NO ₂	1-hr	175	[1]	175	188
PM _{2.5}	24-hr	5	22	27	35

[1] Background concentrations for NO₂ were obtained from the EPA AIRS monitor 482450628 located at 6956 James Gamble Dr., Port Arthur, Jefferson County. For the 1-hr NO₂ NAAQS analysis, the applicant conducted their evaluation by combining NO₂ background concentrations with the predicted concentrations on an hourly basis for each modeled receptor. The applicant followed EPA guidance when developing hourly background concentrations. The applicant determined the three-year average (2016-2018) of the 98th percentile of the annual distribution of the 1-hr concentrations for each hour of the day. These background values were then used in the model (as hourly background scalars) to be combined with model predictions giving a total predicted concentration. The use of this monitor is reasonable based on this monitor being near the project site (approximately 9.5 km to the north), the quantitative analysis of source emissions located within 10 km of the project site and monitor location, and the monitor is located in an area surrounded by greater amount of industry than the project site.

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. The 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 an 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 TCEQ Toxicology Division conducted a further evaluation of diesel fuel concentration evaluated with a 1-hour averaging time. As shown in Table 3, air dispersion modeling predicted a single occurrence of a maximum concentration above the ESL. Toxicology evaluated potential exposures and assessed human health risks to the public. The Toxicology Division determined that the described impacts are acceptable given the conservative nature of both the ESLs and the emissions estimates.

Table 3. Minor NSR Site-wide Modeling Results for Health Effects

Pollutant	CAS#	Averaging Time	GLCmax (µg/m³)	GLCmax Location	ESL (µg/m³)
Ethylene	74-85-1	1-hr	355	Western Property Line	1400
Ethylene	74-85-1	Annual	7	Western Property Line	34
Ammonia	7664-41-7	1-hr	6	155m South	180
Diesel Fuel	68334-30-05	1-hr	1487	Western Property Line	1000

Diesel Fuel	68334-30-05	Annual	11	Eastern Property Line	100
Formaldehyde	50-00-0	1-hr	0.4	1166m North	15

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 (SO₂), hydrogen sulfide (H₂S), and sulfuric acid (H₂SO₄), 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: Nuisance Conditions

Commenters are concerned about odors generated by the proposed project. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network] and John Beard)

Response 2: The primary activities that have the potential to generate odors resulting from this project are associated with transportation and handling of hydrocarbons, which are sources of VOC emissions. All of the potential VOCs from the permitted sources have been evaluated based on operating parameters represented in the application and compared to TCEQ rules. The proposed permit contains the required control processes to minimize odors. When a company operates in compliance with the proposed permit there should be no deterioration of air quality or nuisance odors. While nuisance conditions are not expected if the plant is operated in compliance with the terms of the permit, operators must also comply with 30 TAC § 101.4, which prohibits nuisance conditions.

The TCEQ Region 10 office conducted a site review of the area on September 26, 2019. According to that site review, nuisance odor potential was moderate, and hazard potential was low. The review also described the surrounding land use as timber, marine transportation, and residential; and the nearest off-property receptor is residential, located approximately 2,245 feet away. Emissions from the proposed plant will be distributed over the site. The recommendation of the Regional Office was to proceed with the permit review and the site review indicated no reasons to deny the permit application.

Comment 3: Flora/Fauna/Habitat Loss

Commenters are concerned about the effect of the proposed project on flora and fauna, and on the enjoyment of recreational activities on Pleasure Island and other natural and park facilities in the area. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network] and John Beard)

Response 3: The secondary NAAQS are those the EPA Administrator determines are necessary to protect public welfare and the environment, including animals, crops, vegetation, visibility, and structures, from any known or anticipated adverse effects associated with the presence of a contaminant in the ambient air. Because the emissions from this plant should not cause an exceedance of the NAAQS, air emissions from this plant are not expected to adversely impact land, livestock, wildlife, crops, or visibility, nor should emissions interfere with the use and enjoyment of surrounding land or water. Please see Response 1 for an evaluation of this project's impacts in relation to the NAAQS. In addition, 30 TAC § 101.4 prohibits the discharge of contaminants which may be injurious to, or adversely affect, animal life.

Comment 4: In-Person Public Meeting

Commenters expressed concerns the public meeting would be online and not in-person. They stated that many individuals who are impacted by the permit do not have internet access. In addition, they requested that the public meeting be postponed until the global pandemic subsides. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network])

Response 4: In May 2020, the TCEQ began conducting public meetings virtually in order to continue carrying out its mission and continue agency business while providing a safe and effective way for the public to participate in permitting matters during this unprecedented time. The TCEQ is not able to provide internet access to members of the public. However, in order to ensure the public was able to participate in virtual public meetings, the TCEQ utilized a virtual platform capable of multiple avenues of participation, including telephone participation.

A notice of the public meeting was mailed to all persons on the mailing list for this application, which is composed of all persons who have provided their mailing address through submission of a comment, a request for a public meeting, or request for a contested case hearing. The notice contained information about the proposed plant and the different avenues by which the public could participate and provide comments for consideration. Specifically, the notice included the following information:

- A web link for interested members of the public to access the meeting via webcast;
- A telephone number for those without internet access to participate in the meeting via telephone; and
- A telephone number members of the public could call in advance of the meeting to receive assistance accessing and participating in the meeting.

This particular type of public meeting is authorized by statute. Specifically, TCAA § 382.056(k) and TCEQ rule 30 TAC § 55.154 both provide that during the public comment period, the Executive Director may hold one or more public meetings in the county in which the facility is located or proposed to be located. However, these rules do not require the Executive Director to hold an in-person meeting in the county in which the facility is located or proposed to be located, but rather the purpose of these provisions is to allow members of the public to attend a public meeting without leaving the county. The virtual meeting format complies with the Texas Constitution, Texas law, and the protocols established by the Governor and the Texas Supreme Court for conducting public business during the COVID-19 pandemic.

Comment 5: Access to the Permit Application

Commenter expressed concern about the location of the permit application and associated documents. The commenter stated that the documents were only located at the Keywood Library in Port Neches, which is ten miles away from the Port Arthur population most affected by the project. Commenter requested that the documents be made available in the Port Arthur Library and City Hall. (John Beard)

Response 5: The TCEQ rule at 30 TAC § 39.405(g), Copy of Application, requires applicants to make a copy of the application, including any subsequent revisions, and the Executive Director's preliminary decision available for review and copying at a public place in the county where the facility is located or proposed to be located. 30 TAC § 39.405(g)(1) requires a copy of the administratively complete application to be available for review and copying beginning on the first day the public notice is published in a newspaper of general circulation. Accordingly, an application must be declared administratively complete prior to the publication of the public notice and prior to the application being made publicly available.

The Applicant provided verification to the TCEQ that the required documents had been delivered to the Effie and Wilton Herbert Public Library in Port Neches, Jefferson County, Texas and made available for public viewing on October 13, 2019. The selected library was the only library found in Jefferson County that allowed public access to application documents during the pandemic. In addition, the Notice of Receipt and Intent to Obtain an Air Quality Permit published on October 9, 2019, in *The News*, and in Spanish on October 13, 2019, in *El Perico*; and the Notice of Application and Preliminary Decision for an Air Quality Permit published on June 17, 2020, in English in *The News* and in Spanish on June 21, 2020, in *El Perico* each informed the public that the application and a copy of the standard permit were available for viewing and copying at the TCEQ's Central Office, the TCEQ's Beaumont Regional Office, and at the Effie and Wilton Herbert Public Library.

**Comment 6: Location/ Zoning/ Quality of Life/ Aesthetics/ Property Value/
Economic Impacts**

Location/Zoning

Commenters expressed concern regarding the location of the plant as it relates to the proximity to residential and public areas, including schools, parks and wildlife management areas. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network] and John Beard)

Quality of Life/Aesthetics/Property Value

Commenters are concerned about the effect of the proposed project on their quality of life, on the aesthetics of the area, and on their property value. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network] and John Beard)

Economic Impacts

Commenters are concerned about the effects this project could have on the local economy. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network] and John Beard)

Response 6: Under the TCAA, the TCEQ regulates facilities that emit air contaminants and is limited to consideration of the issues set forth in statute. Accordingly, the TCEQ does not have jurisdiction to consider potential effects from plant location, aesthetics, zoning and land use issues, or effects on property values when determining whether to approve or deny a permit. Except under limited circumstances, which do not exist under this particular permit application, the issuance of a permit cannot be denied on the basis of plant location.

Issues related to the local economy are outside the scope of review of an air quality permit. The Executive Director has reviewed the permit application in accordance with the applicable law, policy, and procedures, in accordance with the agency's mission to protect our state's human and natural resources consistent with sustainable economic development. If an applicant meets the requirements for an air quality permit, the TCEQ must grant the permit.

Comment 7: BACT Analysis and Review

Commenters stated that the BACT review process was flawed. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network])

The commenters raised concerns about the following aspects of the review:

- A. Over-reliance on RACT/BACT/LAER clearinghouse for determining BACT; and
- B. Use of outdated cost estimates in assessing economic feasibility of alternative control measures

Response 7: The Air Permits Division and other applicable TCEQ staff have conducted a thorough review of this permit application to ensure it meets the requirements of all applicable state and federal standards. An applicant is bound by its representations in the application, and those representations become an enforceable part of the permit, including production rates, authorized emission rates, and equipment. If the Applicant deviates from the representations made in the application, on which the permit was developed, the Applicant may be subject to enforcement action.

As to the particular issues raised with the review,

- A. The RACT/BACT/LAER clearinghouse is one resource used to ascertain whether a particular control technology is an available technology, which is one of the criteria for determining BACT. Other resources include recently issued permits in Texas and other states, technical literature, news reports, etc. While the Applicant did present a summary of control technologies reported for each proposed source type in the RACT/BACT/LAER clearinghouse, the review of existing available technologies was not limited to this information.
- B. The Applicant included an economic analysis purporting to demonstrate that certain control technologies (including SCR), while technically feasible, are too costly for the proposed project. The reviewer evaluated the economic analyses using recent cost estimates for the proposed technologies, taking into account the control type and applicability of assumed cost factors. The results of the reviewer's analysis confirmed the Applicant's representation that the alternative technologies were not economically feasible.

Comment 8: Best Available Control Technology

Commenters questioned the control technology proposed in the application. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network])

In particular, commenters raised concerns about the following proposed control technologies and emission rate limits as BACT:

- A. **Dry low-NO_x combustors rather than Selective Catalytic Reduction (SCR) as NO_x BACT for compression turbines.** The commenter states: "...the Applicant proposes to use only dry low-NO_x combustor technology, which does not meet well-established BACT standards. All simple-cycle combustion turbines permitted in Texas since 2017 have been equipped with SCR for NO_x control"
- B. **NO_x (5 ppm) and CO (9 ppm) limits for power generation combustion turbines.** The commenter states: "There is no technical or cost justification for NO_x and CO limits greater than 2.0 ppm and 4.0 ppm respectively for the nine simple-cycle power generation gas turbines at PALNG";
- C. **Ground flare NO_x emission rate is not BACT for NO_x.** The commenter states: "The state-of-the-art enclosed ground flare NO_x limit is 0.025 lb/MMBtu, less

than one-fifth the NO_x limit of 0.1380 lb/MMBtu assumed for the Port Arthur ground flare.”

- D. **Elevated flare, proposed as marine flare, is not BACT for NO_x or VOC.** The commenter states: “The actual DRE [destruction and removal efficiency] for an operational elevated flare cannot be determined using currently available monitoring techniques. However, an enclosed ground flare can readily be monitored at the stack for DRE performance.” “...[E]nclosed ground flares are an alternative ground flare technology that represents BACT for flare NO_x and VOC emissions and should have been identified as BACT for the marine flare”;
- E. **Thermal Oxidizer NO_x emission rate of 0.06 lb/MMBtu.** The commenter states: “John Zink advertises thermal oxidizers with single digit (< 10 ppm, ~0.01 lb/MMBtu) NO_x performance using the RMB™ ultra-low NO_x burner.” “There is no justification provided as to why a lower NO_x BACT limit than 0.06 lb/MMBtu cannot be met at the Port Arthur LN facility;” and
- F. **Fugitive VOC emissions monitoring as BACT rather than leakless technology.** The commenter states: “LDAR 28VHP is substantially less stringent than some other leak detection programs for existing fugitive VOC sources in air districts outside of Texas. The Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 18 (“8-18”) LDAR program, applicable to existing fugitive VOC-emitting sources in the San Francisco Bay area of California, is much more stringent than LDAR 28VHP.” “Leakless technology would satisfy VOC BACT without an LDAR program according to TCEQ fugitive emission control guidance.”

Response 8: Best available control technology (BACT) is an air pollution control method for a new or modified facility that through experience and research, has proven to be operational, obtainable, and capable of reducing or eliminating emissions from the facility, and is considered technically practical and economically reasonable for the facility. BACT may be numerical limitations, the use of an add-on control technology, design considerations, the implementation of work practices, or operational limitations. The Applicant has represented in the permit application that BACT will be used for the proposed new and modified sources.

The contaminants authorized by this permitting action are particulate matter, carbon monoxide, volatile organic compounds, nitrous oxides, sulfur dioxide, sulfuric acid mist, ammonia, and greenhouse gases. The primary control measures applied to this plant are: dry low-NO_x burners, SCR, thermal oxidizers, ground flares, and elevated flares. The permit reviewer evaluated the proposed BACT and confirmed it to be acceptable.

The Applicant provided a detailed technical and quantitative economic analysis for the compressor turbines and demonstrated that the use of SCR would not be an economically feasible method of control for these units. The permit reviewer evaluated

this information, including the emission reduction options available for the process/industry. While technical practicability is established through the demonstrated success of an emission reduction option based on previous use and/or an engineering evaluation of a new technology, economic reasonableness is determined by the cost-effectiveness of controlling emissions (expressed as dollars per ton of pollutant reduced) and does not consider the effect of emission reduction costs on corporate economics. Based on this analysis, low-NO_x burners were determined to meet the criteria for BACT.

BACT criteria differ from lowest achievable emission rate (LAER) requirements. LAER is a more stringent standard that does not take economic feasibility into account. It is applicable in counties that are considered to be in non-attainment of the federal Clean Air Act. Since Jefferson County is not a non-attainment county, LAER does not apply to the PALNG project.

Specific considerations relating to objections A-E noted above are as follows:

- A. Existing or permitted turbines for natural gas compression using SCR as a control technology differ from the proposed PALNG project in crucial ways:
 - a. The permitted facility has not been built and operated, thereby failing to demonstrate its economic feasibility.
 - b. The operating turbine is of a different type than that proposed.
 - c. The operating compressor is subject to LAER requirements rather than BACT.
- B. TCEQ has accepted NO_x and CO limits of 5.0 ppm and 9.0 ppm as BACT in recent permits for simple-cycle power generation turbines of similar type and scale. This meets the requirements of Tier 1 in TCEQ's 3-tier BACT evaluation methodology as described in the document "Air Permit Reviewer Reference Guide APDG 6110."
- C. Ground flares have been designed to meet the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal and maintenance flow conditions as BACT. As stipulated in Special Condition 6, the flares must be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Flares are equipped with flow monitors and the total volume of vent gas allowed to be sent to the flare is limited by the permit. The destruction efficiencies the applicant relied upon come from the TCEQ's guidance document entitled, "Air Permit Technical Guidance for Chemical Sources: Flares and Vapor Oxidizers." This longstanding guidance document is based on TCEQ's experience and research involving additional sources of information including the EPA.
- D. The applicant has represented that the marine flare will be installed at a height of 135 feet. The draft permit, in Special Condition Number 6, requires the flare system to meet the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal and maintenance flow conditions as BACT. Additionally,

the flares must be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. If high winds cause visible emissions, the applicant would be in violation of the permit and required to take corrective action. TCEQ's recent BACT determinations indicate that elevated flares are an acceptable BACT for the types of uses the applicant proposed, and they meet the requirements of Tier 1 BACT review.

- E. Proposed thermal oxidizers are selected for the composition and temperature of the design gas stream. The proposed oxidizers are appropriate for this application and the NO_x limit of 0.06 lb/MMBtu meets the requirements of Tier 1.
- F. Leakless technology for fugitive emissions control has been applied as LAER in nonattainment regions such as the San Francisco Bay area. However, this more stringent standard does not apply to attainment areas such as Jefferson County. The proposed leak detection and repair (LDAR) 28VHP program is well-established as BACT for fugitives in Texas and is acceptable for the PALNG project.

Comment 9: Emission Rates and Calculations

Commenters questioned the accuracy and methodology for determining the emission rates for the proposed project. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network])

Response 9: Emissions from this plant were determined by manufacturer's data, and mathematical equations calculated according to the EPA's Compilation of Air Pollutant Emission Factors, AP-42 Manual. 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).

Comment 10: PSD Increments

Commenters are concerned about the quantity of emissions that will result from the project and if the project will exceed allowable Prevention of Significant Deterioration (PSD) increments. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network])

Response 10: 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.

This site is a named source and has proposed emission rates greater than 100 tpy of at least one pollutant, making it a major source. The pollutants VOC, NO_x, SO₂, CO, PM,

PM₁₀, PM_{2.5}, H₂SO₄, and CO_{2e} were found to exceed the significant PSD thresholds and were therefore reviewed using PSD criteria.

In addition, the modeled concentration of the pollutant PM_{2.5} was found to be above *de minimis* ground level concentrations and therefore PM_{2.5} is subject to increment analysis. The proposed increases of all other pollutants with this project are below the *de minimis* concentrations and are not subject to PSD increment analysis.

The results of the PSD increment analysis for PM_{2.5} are the following:

Table 4. Results for PSD Increment Analysis

Pollutant	Averaging Time	GLCmax (µg/m ³)	Increment (µg/m ³)
PM _{2.5}	24-hr	8.8	9

The predicted maximum ground-level concentration averaged over a 24-hour interval is below the allowed increment at the project site. Therefore, the emissions will not exceed the PSD increment.

Comment 11: Complaints

Commenter expressed concern about reporting complaints and how complaints are handled. (John Beard)

Response 11: The TCEQ evaluates all complaints received. If a facility is found to be out of compliance with the terms and conditions of its permit, it will be subject to investigation and possible enforcement action. Individuals are encouraged to report any concerns about nuisance issues or suspected noncompliance with terms of any permit or other environmental regulation by contacting the TCEQ Beaumont Regional Office at 409-898-3838 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186.

Citizen-collected evidence may be used in such an action. *See* 30 TAC § 70.4, Enforcement Action Using Information Provided by Private Individual, for details on gathering and reporting such evidence. Under the citizen-collected evidence program, individuals are providing information on possible violations of environmental law and the information can be used by the TCEQ to pursue enforcement. In this program, citizens can become involved and may eventually testify at a hearing or trial concerning the violation. For additional information, see the TCEQ publication, "Do You Want to Make an Environmental Complaint? Do You Have Information or Evidence?" This booklet is available in English and Spanish from the TCEQ Publications office at 512-239-0028 and may be downloaded from the agency website at <http://www.tceq.texas.gov> (under Publications, search for Publication Number 278).

Comment 12: Safety/Accidents

Commenters are concerned about the safety of the facility. Commenters stated that accidents at the facility could have adverse effects on PA-CAN members. John Beard asked how the facility would handle events such as Hurricane Laura. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network] and John Beard)

Response 12: The TCEQ takes your health and environmental concerns seriously. The proposed permit meets all federal and state regulatory requirements and is protective of human health and the environment.

In the event of an emergency, the Local Emergency Planning Committee and the regulated entity have the primary responsibility of notifying potentially impacted parties regarding the situation. In addition, as set forth in 30 TAC § 101.201(a), regulated entities are required to notify the TCEQ regional office within 24 hours of the discovery of releases into the air and in advance of maintenance activities that could or have resulted in excess emissions.

Proposed projects which involve toxic chemicals that are known or suspected to have potential for life threatening effects upon off-facility property in the event of a disaster, and involve manufacturing processes that may contribute to the potential for disastrous events, may require a disaster review for the application. This application did not require a disaster review.

Comment 13: Environmental Justice

Commenters stated that the review process failed to consider environmental justice and disparate impacts for this project. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network] and John Beard)

Response 13: Air permits evaluated by the TCEQ are reviewed without reference to the socioeconomic or racial status of the surrounding community. The TCEQ is committed to protecting the health of the people of Texas and the environment regardless of location. Although there are no TCEQ rules addressing environmental equity issues, such as the location of permitted facilities in areas with minority and low-income populations, disparate exposures of pollutants to minority and low-income populations, or the disparate economic, environmental, and health effect on minority and low-income populations, the TCEQ has made a strong policy commitment to address environmental equity.

The 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 on Environmental Equity may be found on the TCEQ website:

<https://www.tceq.texas.gov/agency/hearings/envequ.html>.

Comment 14: Air Monitoring and Reporting Requirements

Commenters expressed concern that the proposed monitoring and reporting requirements were insufficient to ensure compliance with the Clean Air Act and protect local residents. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network] and John Beard)

John Beard raised concerns that the monitoring equipment was not accurate, and that people are more sensitive.

Response 14: 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 will be monitored by continuous emissions monitoring systems (CEMS) on compression and power generation turbines, visible emission and opacity monitoring of combustion sources, monitoring of sulfur content upstream and downstream of thermal oxidizers, fuel usage meters on turbines and preheaters, flow meters on flares, and run-time meters on engines. Thermal oxidizers will also have temperature and oxygen monitors. Auditory, visual and olfactory (AVO) inspections will be carried out daily to identify potential fugitive emissions. 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 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 15: Cumulative and Additive Effects/ Cumulative Industrial Risks

Commenters question whether draft permit conditions are adequate to protect the public from cumulative risks in accordance with Texas Water Code § 5.130. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network])

Commenters question whether TCEQ considered cumulative risks of concentrated heavy industrial sources of air pollution. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network])

Response 15: As discussed in Response 1, the Applicant conducted an Air Quality Analysis (AQA) as part of this application. The AQA is a report containing information that demonstrates whether operation of the proposed plant would cause or contribute to an exceedance of the NAAQS or adversely affect human health and welfare. As part of the AQA, the Applicant conducted air dispersion modeling. An air dispersion model is a mathematical simulation of how air pollutants disperse in the ambient atmosphere. The model predicts ambient air ground-level concentrations that are used to determine compliance with applicable standards.

For each criteria pollutant subject to a NAAQS review, a modeling significance analysis was conducted to determine if the contaminant was below its de minimis level or

whether a full NAAQS analysis would be required. The de minimis value is defined as that value below which a significant change in air quality is not anticipated, due to the emissions generated by the source, and no further evaluation of that contaminant is required. The one-hour NO₂ and 24-hour PM_{2.5} concentrations were subject to a full NAAQS analysis. A full NAAQS analysis requires an evaluation of all on-property sources, off-property sources within the modeling domain, and representative monitored background concentrations, which are added to the modeled concentration (both on-property and off-property sources) to account for sources not explicitly modeled.

Based on a review of the AQA, the Executive Director concluded that the Applicant sufficiently addressed the cumulative and aggregate impacts associated with the project by including existing background concentrations from representative monitors in the AQA and, thus, demonstrating that the proposed emissions are not expected to cause or contribute to an exceedance of the NAAQS. The TCEQ cannot deny authorization of a facility if a permit application contains a demonstration that all applicable statutes, rules, and regulations will be met.

Comment 16: Acid Rain

Commenters are concerned about the effects of this project in relation to acid rain. (Amy Catherine Dinn and Chase Porter [on behalf of Port Arthur Community Action Network])

Response 16: Acid Rain requirements are addressed through the Federal Acid Rain Program. The requirement to obtain an Acid Rain Permit is independent of the requirement to obtain a New Source Review permit.

Comment 17: Comments and Questions for Applicant and Public Officials

Commenter raised questions about whether the Applicant would bring jobs and opportunities to the area with this project. Commenter expressed concerns that the unemployment for the area is some of the highest in Texas. Commenter asked Applicant about the programs they were bringing to the local community and whether they will be a good corporate citizen to the local community.

Response 17: These specific questions or concerns were addressed to the Applicant or Public Officials and are therefore included for completeness, but not addressed by the Executive Director.

CHANGES MADE IN RESPONSE TO COMMENT

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

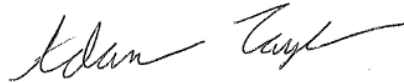
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REPRESENTING THE
EXECUTIVE DIRECTOR OF THE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY