

TCEQ AIR QUALITY PERMIT NUMBERS 22052, PSDTX1578, N286, GHGPSDTX201; 46307, PSDTX1580, N288, GHGPSDTX202; 46426, PSDTX999M1, N290, GHGPSDTX203; and 19806, PSDTX1586

APPLICATION BY	§	BEFORE THE
TPC GROUP LLC	§	TEXAS COMMISSION ON
HOUSTON PLANT	§	ENVIRONMENTAL QUALITY
HOUSTON, HARRIS 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 Chief Clerk received timely comments from the following persons: Latrice Babin (on behalf of Harris County Pollution Control Services "HCPCS"), Gabriel Clark-Leach (on behalf of the Sierra Club, Environmental Integrity Project, Air Alliance Houston, Texas Campaign for the Environment, and Environment Texas, *collectively the "Sierra Club"*), Stephany C. MgBadigha (on behalf of Air Alliance Houston, Achieving Community Tasks Successfully, Bayou City Waterkeeper, Coalition for Environment, Equity & Resilience, Environmental Community Advocates of Galena Park, Environmental Defense Fund, Environment Texas, Healthy Port Communities Coalition, Houston Sierra Club, Mi Familia Vota, Moms Clean Air Force, Texas Campaign for the Environment, Texas Housers, One Breath Partnership, and Public Citizen, *collectively "Air Alliance Houston"*), Jose Alonso, Leah Binkovitz, Jessie Casteel, Susan Chadwick, Rebecca Conchos, Molly Claire Cook, Barbara G. Corbello, Avery Croley, Frances Castaneda Dyess, Ashley Ellis, Rick Felan, Edward Santos Garza, Annelise Goldman, Clara Goodwin, Alexandria Nicole Gordon, Howard F. Guzman, Noah Hester, Nalleli Hidalgo, Simone Kern, Louise Kidder, James Mitchell, Dennis Nance, Nora Olabi, Ana M. Parras, Juan Parras, Benjamin Perodeau, Eileen Puente, Susan Rogers, Luis Adrian Ruiz, Adrian Shelley, Carolyn Stone, Hannah Thalenberg, Chelsea Ellen Thomas, Stephanie Thomas, Corey Williams, and Raquel Willis. This Response addresses all timely public comments received, whether or not withdrawn.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

TPC Group LLC (Applicant) has applied to the TCEQ for amendments to four of its existing New Source Review Authorizations under Texas Clean Air Act (TCAA) § 382.0518. This will authorize the modification of an existing facility that may emit air contaminants.

The permits will authorize the Applicant to modify the TPC Houston Plant. The plant is located at 8600 Park Place Blvd. Houston, Harris County. Contaminants authorized under these permits include carbon monoxide, hazardous air pollutants, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less (PM₁₀) and 2.5 microns or less (PM_{2.5}), sulfur dioxide, and Greenhouse Gases (GHG).

Procedural Background

Before work is begun 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. These permit applications are for permit amendments to Air Quality Permit Nos. 22052, PSDTX1578, N286, GHGPSDTX201; 46307, PSDTX1580, N2880, GHGPSDTX202; 46426, PSDTX999M1, N290, GHGPSDTX203; and 19806, PSDTX1586.

The amendment application for the BD Expansion Project, affecting Permit Nos. 22052, PSDTX1578, N286, GHGPSDTX201; 46307, PSDTX1580, N2880, GHGPSDTX202; and 46426, PSDTX999M1, N290, GHGPSDTX203 was received on March 5, 2020 and declared administratively complete on April 15, 2020. The Notice of Receipt and Intent to Obtain an Air Quality Permit (first public notice) for these permit applications was published in English, on May 06, 2020, in the *Pasadena Citizen* and in Spanish, on May 03, 2020, in *La Voz*. The amendment application for the DH2 Heat Recovery project affecting Permit No. 19806, PSDTX1586 was received on May 5, 2020 and declared administratively complete on May 14, 2020. The Notice of Receipt and Intent to Obtain an Air Quality Permit (first public notice) for these permit applications was published in English, on June 10, 2020, in the *Pasadena Citizen* and in Spanish, on June 14, 2020, in *La Voz*. A Notice of Application and Preliminary Decision for an Air Quality Permit (second public notice) for both projects was published in English, on May 12, 2021 in the *Pasadena Citizen* and in Spanish, on May 16, 2021, in *La Voz*. Because these applications were received after September 1, 2015, they are subject to the procedural requirements of and rules implementing Senate Bill 709 (84th Legislature, 2015).

COMMENTS AND RESPONSES

COMMENT 1: Public Notice/ Description of Amendment in the Public Notice

Commenters stated that the community, including nearby schools, was not properly notified about the Applicant's proposed expansion and expressed concern that there is a lack of transparency about the proposed project. The commenters stated that the Applicant published notice in dense legal language, only in English, on the back of a Pasadena newspaper and expressed concern that the choice of newspaper excluded residents on the east side from being notified. The commenters stated that the permitting process is intentionally opaque because corporations do not want their pending applications contested.

Sierra Club expressed concern about the description of the project included in the public notice. The commenters stated the notice is deficient because it mischaracterized the proposed projects by incorrectly stating that all new emissions addressed by the notice package will be offset by reductions at a greater than 1 to 1 ratio and that all new emissions will be subject to the Lowest Achievable Emission Rate (LAER). Sierra Club stated that the description was untrue because only one contaminant, VOC, was subject to LAER and emission offset requirements. The commenters stated the project will result in emission increases of PM, CO, NO_x, SO₂, and HAPs that are not required to be offset. Sierra Club stated that this mischaracterization interfered with public participation in this matter by incorrectly stating that this project would result in a decrease in emission rates for all pollutants that are emitted by the Houston Plant and that the notice must be corrected to include an accurate description of the project and republished.

(Sierra Club, Jessie Casteel, Susan Rogers)

RESPONSE 1: The TCAA § 382.056 requires that an applicant publish notice. Notice must be published in a newspaper of general circulation in the municipality in which the facility is located or proposed to be located. The commission also requires that notice be published in an alternative language if the elementary or middle school nearest the proposed facility offers a bilingual education program as required by Texas Education Code Chapter 29, Subchapter B. The TCEQ adopted rules for these public notice requirements in 30 TAC § 39.603, Public Notice of Air Quality Applications, Newspaper Notice. Individual notice to nearby residents or schools is not required by the statute or TCEQ rules. As described above, the Applicant was required to publish notice in both English and Spanish.

To demonstrate compliance with public notice requirements, applicants are required to provide the Office of the Chief Clerk with copies of the published notice and a publisher's affidavit verifying facts related to the publication, including that the newspaper is a paper of general circulation in the municipality in which the proposed facility is located or proposed to be located. The Applicant represented notice was published in accordance with TCEQ rules and provided corresponding signed affidavits and verification forms to the commission. The Executive Director reviewed the newspaper tearsheets to verify the information was correctly published.

30 TAC § 39.604 also requires that signs be placed at the site of the existing or proposed facility. The sign(s) must state that an air permit application has been filed, the proposed permit number, and how the public may contact the commission for further information. Each sign placed at the site must be located within ten feet of every property line paralleling a public highway, street, or road. Signs must also be visible from the street, meet lettering requirements, meet size requirements, and be spaced at not more than 1,500-foot intervals. A minimum of one sign, but no more than three signs are required along any property line paralleling a public highway, street, or road. Finally, in cases where notice is required to be published in an alternative language, the applicant must also post signs in the applicable alternative language. The Applicant provided verification to the commission that signs were

posted at the Houston Plant in accordance with 30 TAC § 39.604.

The TCEQ rules in 30 TAC § 39.411(e)-(g) provide the text that must be included in the public notice. The notice must include a description of the facility, information on how an affected person may request a public hearing, pollutants the facility will emit, and any other information the TCEQ requires by rule.

The public notice did not indicate that all new emissions will be offset or that all emission rates will decrease as a result of this project. Because nonattainment areas are pollutant specific, only those contaminants subject to nonattainment review are required to be offset. Accordingly, the language in the notice concerning offsets appears in the section explicitly concerning the nonattainment review. Specifically, the public notice stated:

As required by the nonattainment review, all air contaminants have been evaluated and the "lowest achievable emission rate" has been addressed for the control of these contaminants. The emission increases from this project will be offset with emission reductions by a ratio of 1.2 to 1.

The Houston Plant is located in a serious ozone nonattainment area. Because the proposed project will result in a significant net increase of VOC emissions, those emissions must be offset at a ratio of 1.2 to 1. *See* 30 TAC § 116.12(20)(A).

Accordingly, the notice correctly indicated that the emissions subject to nonattainment review would be offset at a ratio of 1.2 to 1.

COMMENT 2: Virtual Public Meeting

Susan Rogers expressed concern about the effectiveness of the virtual meeting platform, further stating that she wanted to see the individuals representing both the Applicant and the TCEQ so that the public could express their concerns face to face. Ms. Rogers stated that the meeting was not consistent with the best practices for public engagement.

RESPONSE 2: The TCEQ rules require that a public meeting be held if a member of the legislature who represents the general area in which the facility is located requests a public meeting or if the TCEQ Executive Director determines that there is a substantial or significant degree of public interest. *See* 30 TAC § 55.154(c)(2). Due to the significant public interest from citizens in the community, the Executive Director decided to hold a public meeting on these applications.

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. In order to ensure the public was able to participate in virtual public meetings, the TCEQ utilizes a virtual platform capable of multiple avenues of participation, including telephone participation. However, the TCEQ does not utilize video participation for virtual public meetings on permit applications. 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 though

Executive Director's Response to Public Comment

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submission of a comment, a request for a public meeting, or request for a contested case hearing. The notice contained information about the proposed projects 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.

The virtual public meeting for this application was held on August 12, 2021. This Response is the written response to all formal comments received during the comment period, including those received at the virtual public meeting. A copy of this Response will be sent to each person who submitted a formal comment, a public meeting request, or a request for a contested case hearing or who requested to be on the mailing list for this permit application and provided a mailing address. All timely formal comments received are included in this Response and will be considered before a final decision is reached on the permit application.

COMMENT 3: Access to Permit Documents

Sierra Club stated that the Applicant failed to make a complete copy of its application publicly available because it improperly marked some information as “confidential.” Specifically, the commenters stated that information concerning the Applicant’s BACT analysis may not be deemed confidential.

RESPONSE 3: The TCEQ rules require applicants to make a copy of their application available for review and copying at a public place in the county where the facility is located or proposed to be located. *See* 30 TAC § 39.405(g). Specifically, 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 of newspaper publication of the first public notice and to remain available during the public comment period.

During the second notice period, 30 TAC §§ 39.405(g)(2) and (3) require a copy of the complete application (including any subsequent revisions) and the Executive Director’s preliminary decision, the draft permit, and air quality analysis to be available for public viewing beginning on the first day of the publication of the second public notice.

The Applicant submitted the required Public Notice Verification Forms verifying that copies of the applications were made available at the Park Place Regional Library, 8145 Park Place Boulevard, Houston, Harris County, during the comment period. However, in response to public health directives issued during the COVID-19 public health emergency, the library was closed during a portion of the comment period. Accordingly, the Applicant also made copies of the applications available online; the

second notice contained a link to view the documents online. In addition, copies of the draft permits and preliminary determination summaries for each permit were available on the TCEQ's website. *See* Response 10 concerning confidential information.

COMMENT 4: Air Quality/Health Effects

Commenters expressed concern about the potential effects of the proposed emissions increases on air quality and the environment. Commenters stated that the Houston area is already burdened with high pollution and expressed concern that this expansion project would further impact air quality in the area. Commenters also expressed concern that the proposed project would cause adverse health effects, including pulmonary disease, cancer, respiratory diseases, asthma, developmental disorders, and death. Commenters expressed particular concern about sensitive populations such as children, the elderly, and people with existing medical conditions. Commenters expressed specific concern regarding the proposed emissions of butadiene, which the commenters stated is a carcinogen, as well as proposed emissions of ozone precursors (VOC and NO_x). Commenters state that they deserve clean air and should not be forced to live in fear about the air they breathe. Rick Felan questioned the maximum level of allowable emissions ensured to not harm human health and asked whether this level should be 'zero'. Benjamin Perodeau expressed concern that members of the community cannot bear the costs of medical care that could be increased by the proposed project. Louise Kidder stated that butadiene emissions contribute to the formation of ozone. Simone Kern commented that emissions from fossil fuels should be decreased rather than increased. Susan Rogers commented that the human cost of this expansion is too high. Juan Parras commented that the community's health cost and expenses are of no concern to TCEQ. Sierra Club also expressed concern that the proposed amendments would increase nuisance odors from 1,3-Butadiene emissions.

Cumulative and Aggregate Impacts

Some commenters expressed concern about the cumulative or aggregate effect of the proposed project in combination with other industrial facilities in the area. Adrian Shelly commented that the permitting process does not provide any opportunity to consider neighboring facilities and expressed concern that other nearby facilities emitting the same pollutants were not considered. Clara Goodwin commented that the community already experiences disproportionate impacts from the petrochemical industry. Molly Clair Cook commented that community members are dying from diseases related to air quality because the air is toxic.

(Air Alliance Houston, Sierra Club, Jose Alonso, Jessie Casteel, Susan Chadwick, Rebecca Conchos, Rebecca Conchos, Molly Claire Cook, Barbara G. Corbello, Avery Croley, Ashley Ellis, Rick Felan, Edward Santos Garza, Annelise Goldman, Clara Goodwin, Alexandria Nicole Gordon, Noah Hester, Nalleli Hidalgo, Simone Kern, Simone Kern, Louise Kidder, James Mitchell, Dennis Nance, Nora Olabi, Ana M. Parras, Juan Parras, Juan Parras, Ana Parras, Benjamin Perodeau, Susan Rogers, Luis Adrian Ruiz, Adrian Shelley, Carolyn Stone, Hannah Thalenberg, Chelsea Ellen Thomas, Stephanie Thomas, Corey Williams)

RESPONSE 4: 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 air emissions proposed to be authorized 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. The Applicant proposed two separate projects, the BD Expansion project and the DH2 Heat Recovery project. The BD Expansion project seeks to authorize a butadiene capacity increase and reliability improvements. The BD Expansion project proposes to modify units authorized by NSR Permit Nos. 46307, 46426, and 22052. The DH2 Heat Recovery project seeks to address particulate matter (PM) compliance issues, to debottleneck the Dehydro 2 Unit (DH2), and other miscellaneous changes. As described in detail below, the Executive Director determined that the emissions proposed to be authorized by these projects 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 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}).

ESLs

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 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 likelihood of whether adverse health effects caused by emissions from the refinery

¹ 40 CFR § 50.2.

could occur in members of the general public, including sensitive subgroups such as children, the elderly, or people with existing respiratory conditions was determined by comparing the facility's predicted air dispersion computer modeling concentrations to the relevant state and federal standards and ESLs. TCEQ staff used modeling results to verify that predicted ground level concentrations from the plant are not likely to adversely impact off-property receptors. The overall evaluation process provides a conservative prediction that is protective of the public. The modeling predictions were reviewed by the TCEQ Air Permits Division, and the modeling analysis were determined to be acceptable.

BD Expansion Project NAAQS Analysis

The Applicant conducted a NAAQS analysis for SO₂, NO₂, CO, PM₁₀, and PM_{2.5} emissions associated with BD Expansion project. The first step of the NAAQS analysis is to compare the modeled emissions against the established de minimis level. Maximum predicted ground-level concentrations (GLCmax) 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 for the BD Expansion project.

Table 1. Modeling Results for De Minimis Review BD Expansion Project

Pollutant	Averaging Time	GLCmax (µg/m ³)	De Minimis (µg/m ³)
SO ₂	1-hr	2.2	7.8
SO ₂	3-hr	1.8	25
NO ₂	1-r	1.6	7.5
NO ₂	Annual	0.1	1
CO	1-hr	72	2000
CO	8-hr	51	500
PM ₁₀	24-hr	2	5
PM ₁₀	Annual	0.4	1
PM _{2.5}	24-hr	1.1	1.2
PM _{2.5}	Annual	0.16	0.2

As shown above, all the predicted concentrations were below the applicable de minimis level. 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.

Ozone Analysis

The Houston Plant is located in the Houston-Galveston-Brazoria ozone nonattainment area. Ground level ozone is not emitted directly into the air but is formed by a chemical reaction between NO_x and VOC in the presence of sunlight. The Houston Plant is a major source under the Nonattainment New Source Review (NNSR) program for ozone with NO_x and VOC being the applicable precursors. Because the proposed project triggered NNSR permitting requirements for VOC, the Applicant was not required to conduct an ozone analysis.

BD Expansion Project Health Effects Analysis

The Applicant conducted a health effects analysis for the non-criteria pollutants associated with the BD Expansion Project following the Modeling and Effects Review Applicability (MERA) guidance.² 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 ESLs 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. The Applicant modeled the non-criteria pollutants associated with this project, including 1,3-butadiene. All off the pollutants satisfied the MERA criteria, with the exception of dimethylformamide, and therefore did not require further analysis. Because emissions of dimethylformamide exceeded the ESL, the Applicant was required to conduct site-wide modeling for this pollutant. The results of the modeling are presented in Table 2.

Table 2. Minor NSR Site-wide Modeling Results for Health Effects

Pollutant	CAS#	Averaging Time	GLCmax (µg/m³)	GLCmax Location	GLCni (µg/m³)	GLCni Location	ESL (µg/m³)
dimethylformamide	68-12-2	1-hr	410	Northern Property Line	41	Southern Property Line	300

The air dispersion modeling determined the GLCmax and also predicted the non-industrial ground level concentration (GLCni). The GLCni is the maximum concentration that would occur at a non-industrial receptor. The modeling predicted that dimethylformamide emissions will exceed the ESL. However, the predicted impacts met the Tier II criteria outlined in the MERA’s Toxicology Effects Evaluation Procedure which requires maximum ground level concentrations to be less than 2 times the ESL at an industrial receptor and less than the ESL at a non-industrial receptor. Therefore, the impacts are acceptable given the magnitude, frequency, and location of ESL exceedances. Accordingly, no adverse health or welfare effects are expected as a result of exposures to the non-criteria pollutants.

The potential for odor nuisance is reviewed through the use of ESLs. The short-term ESL for 1,3-butadiene is odor-based. As described above, the Applicant performed a health effects analysis as described above and the short-term GLCmax was less than the short-term ESL for 1,3-butadiene. Therefore, no further analysis was required based on MERA guidance and the 1,3-butadiene emissions would not be expected to cause an odor nuisance.

² See APDG 5874 guidance document.

BD Expansion Project State Property Line Analysis

Because the BD Expansion Project proposed an increase in 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). As shown in Table 3, this analysis demonstrated that resulting air concentrations will not exceed the applicable state property line standard.

Table 3. Project-Related Modeling Results for State Property Line for BD Expansion Project

Pollutant	Averaging Time	GLCmax (µg/m ³)	De Minimis (µg/m ³)
SO ₂	1-hr	2.2	14.3

DH2 Heat Recovery Boiler Project NAAQS Analysis

The Applicant conducted a NAAQS analysis for PM₁₀ and PM_{2.5} emissions associated with the DH2 Heat Recovery Boiler Project. No other emissions are increasing as a result of this project. The results of the de minimis analysis for the Boiler Project are shown in Table 4 below.

Table 4. Modeling Results for PSD De Minimis Analysis DH2 Heat Recovery Project

Pollutant	Averaging Time	GLCmax (µg/m ³)	De Minimis (µg/m ³)
PM ₁₀	24-hr	2	5
PM ₁₀	Annual	0.3	1
PM _{2.5}	24-hr	1.1	1.2
PM _{2.5}	Annual	0.16	0.2

As shown above, all the predicted concentrations were below the applicable de minimis level. Therefore, these pollutants should not cause or contribute to a violation of the NAAQS and are protective of human health and the environment.

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 5: PM Emissions/ Project Aggregation

Commenters expressed concern that the Applicant is not in compliance with its

existing PM emissions limits. Sierra Club stated the Applicant is not in compliance for various sources at the Houston Plant and expressed concern that its Title V Permit does not establish a compliance schedule for PM. Sierra Club is concerned that the Applicant is seeking authorization to amend Permit No. 19806 to relax applicable PM control requirements, rather than proposing to install new controls or to make changes to noncompliant facilities to bring emissions within the limits currently authorized. Stephanie Thomas also expressed concern that two of the boilers are unable to comply with currently applicable PM limits. Ms. Thomas asked how long the non-compliance has been going on, how much unauthorized particulate matter the boilers have emitted, and why the Applicant has been unable to comply with the PM limits for the unit.

Sierra Club stated that the PM limits proposed to be authorized will result in a significant increase in authorized PM emissions and is a major modification triggering Prevention of Significant Deterioration (PSD). Sierra Club stated that because each of the projects the Applicant proposed are subject to major NSR requirements, TCEQ modeling guidance requires the impacts analysis for these projects to include the proposed emissions from new facilities and emissions increases and decreases at any facility site-wide over a contemporaneous period. Sierra Club also expressed concern about the review of PM_{2.5} emissions and commented that the emissions increases from both projects should be considered together. Specifically, Sierra Club stated the modeling for both projects demonstrated that the maximum PM_{2.5} air quality impacts were below the applicable PM_{2.5} Significant Impact Level (SIL). However, Sierra Club expressed concern that if the maximum modeled impacts for each project is added together to reflect site-wide contemporaneous increases for all the facilities that are part of the notice package, PM_{2.5} impacts for each project exceed the SIL. Sierra Club believes that the Applicant avoided a full PM_{2.5} impacts analysis by inappropriately segregating those increases into two separate projects.

(Sierra Club, Stephanie Thomas)

RESPONSE 5: As described above, the Applicant proposed two separate projects, the BD Expansion project and the DH2 Heat Recovery project. The proposed PM emission increases from both projects were subject to PSD review. The Executive Director considered whether the projects should be considered together or aggregated. Project aggregation describes the consideration of multiple physical or operational changes as a single project for determining major NSR applicability requirements. What constitutes a "project" is a case-by-case decision that is both site-specific and fact-driven. There is no predetermined list of activities that should be aggregated for a given industry or industries. The EPA has developed guidance providing that projects should be aggregated if nominally-separate activities are substantially related. The Applicant represented that each project was a discrete project not substantially related to the other. Specifically, the BD Expansion project seeks to authorize a butadiene capacity increase and reliability improvements at the Houston Plant. Alternatively, the Applicant submitted the DH2 Heat Recovery project, in part, to comply with a Compliance Assurance Plan to address PM compliance issues with the DH2 Heat Recovery Boilers. Accordingly, the two projects are not substantially related and were

properly considered separate projects.

In the DH2 Heat Recovery project, the Applicant proposed higher PM emission rates based on emission testing, along with raising the stack heights to 180ft. The Applicant conducted a best available control technology (BACT) analysis and Air Quality Analysis for the proposed increases. As described in Response 4, the PM emissions proposed to be authorized were below the de minimis level and would therefore not be expected to cause an exceedance of the NAAQS and are considered protective of human health and the environment. The project did not seek to relax applicable control requirements. As described in Response 8, the BACT is not proposed to change with this project. The decision by the Executive Director to issue the permit is based upon the authority and direction of the Texas Clean Air Act. Specifically, TCAA § 382.0518 provides that the TCEQ shall issue the permit if an application demonstrates that the proposed facility will use at least the BACT and there is no indication that the emissions from the facility will contravene the intent of the TCAA.

Because the TPC Houston Plant is a major source, the Applicant was required to obtain a Title V Federal Operating Permit in accordance with 30 TAC Chapter 122. The Applicant holds Federal Operating Permit No. O1598. However, because this is an application for an amendment to case-by-case NSR Permit No. 19806, comments concerning the Applicant's Federal Operating Permit are outside the scope of the review for this application.

COMMENT 6: Emission Increases During the Contemporaneous Period

Sierra Club stated that before TCEQ may issue the permit, the Applicant must demonstrate that the requested emissions increases will not cause or contribute to exceedances of the NAAQS or cause air quality impacts that are not protective of public health and welfare. Sierra Club stated that the Applicant failed to properly consider cumulative impacts resulting from all emission increases during the contemporaneous period which renders the impacts demonstration deficient for all of the proposed contaminant emission rates increases. Sierra Club stated that the Applicant conducted two separate air quality impacts analyses, neither of which considered all of the emissions increases that would be authorized by all of the draft permits included in the notice package.

In addition, the commenters stated that the Applicant has authorized various emissions increases during the contemporaneous period using Permits by Rule (PBRs) and the commenters expressed concern that increases from these projects were not included in either of the impacts analyses. Sierra Club is concerned the Applicant may use PBRs to authorize additional fugitive emissions that should have been included as part of the LAER analysis. The commenters expressed concern that the Applicant may selectively incorporate emissions authorized by PBR into its existing permit in a way that could pose a threat to public health or to avoid LAER and emission offset requirements triggered by this project.

The commenters stated that even if the PBRs the Applicant has registered during the contemporaneous period are not directly related to the projects addressed in the

notice package, the Applicant must still demonstrate those emissions are protective of public health and may not cause or contribute to a violation of the NAAQS. Sierra Club also stated that the MSS emissions must be included in the Houston Plant's potential to emit for purposes of the netting demonstration and impacts evaluation, even if they are not being directly authorized in this project.

RESPONSE 6: Major NSR is applicable for new major sources and major modifications of existing major sources. If an owner or operator is modifying an existing facility, they must determine if the project is a "major modification." A major modification is any physical change in, or change in the method of operation of a major stationary source that causes a significant project emissions increase and a significant net emissions increase. See 30 TAC § 116.12(20)(A). To be subject to major NSR requirements, the project must result in both (1) a significant emission increase from the project and (2) a significant *net* emission increase at the stationary source, taking account of emission increases and emission decreases attributable to other projects undertaken at the stationary source within a specific time frame (contemporaneous netting). Netting is a summation of the emission increases from the current project plus all creditable emissions changes (both increases and decreases) within the contemporaneous period. The emission increase of the current project results from a comparison of the baseline actual emission rate to either the projected actual emission rate or the potential to emit (PTE) for modified or affected facilities, plus the PTE of any new facilities.

As described above, the Applicant proposed two separate projects, the BD Expansion project and the DH2 Heat Recovery project. The Applicant conducted a netting analysis for the BD Expansion project. The permit reviewer reviewed the netting analysis and determined the Applicant properly considered all emissions increases and decreases during the contemporaneous period. Permits by Rule (PBRs) must be included in a major NSR applicability analysis if they are related to the proposed project. No PBRs related to the proposed project were required to be included in the evaluation. Planned MSS activities are authorized by Permit Nos. 46307 and 46426 (associated with the BD Expansion project) and were accordingly included in the major source applicability analysis.

COMMENT 7: Federal Applicability and Netting Demonstration for NO_x Emissions

Commenters expressed concern with the federal applicability and netting demonstration for NO_x emissions. Sierra Club and Air Alliance Houston stated that the proposed construction of Boiler 12, along with NO_x emissions increases triggers major NSR preconstruction permitting requirements. Specifically, Sierra Club expressed concern with the netting demonstration conducted for the NO_x emissions reductions from Boiler 9. Sierra Club stated that while the Applicant claimed a 398.59-ton net reduction in annual NO_x emissions due to the shutdown of Boiler 9, the project should have triggered NNSR. Sierra Club stated the project is major for two reasons: The Applicant has overstated the reductions that will result from shutting down its boiler, and the reductions are not creditable because the Applicant does not actually have the credits necessary to authorize the emissions it proposed to decrease. Simone Kern and Stephanie Thomas also expressed concern that the Applicant may have inflated the

Executive Director's Response to Public Comment

TPC Group LLC, Permit Nos. 22052, PSDTX1578, N286, GHGPSDTX201; 46307, PSDTX1580, N2880, GHGPSDTX202; 46426, PSDTX999M1, N290, GHGPSDTX203; and 19806, PSDTX1586
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NO_x reductions. Ms. Thomas also asked how old Boiler 9 is and if it has the physical and operational capacity to operate at the levels that were used to calculate the representative NO_x reductions.

First, Sierra Club stated that the claimed NO_x reduction is significantly greater than the actual NO_x emissions from Boiler 9 during the baseline period, as reported to the TCEQ's Emission Inventory and MECT programs. Specifically, Sierra Club stated that based on the Emissions Inventory Questionnaires submitted by the Applicant, actual NO_x emissions from Boiler 9 were 315 and 246 tons in 2018 and 2017, respectively. In addition, Sierra Club states that the annual average NO_x emissions reported for the entire Houston Plant were 376.94 tons, 20 tons lower than the baseline actual emissions used in the netting demonstration. Air Alliance Houston also expressed concern that the Applicant was claiming NO_x reductions greater than its actual emissions.

Second, Sierra Club stated that the emissions reductions claimed for the proposed shutdown of Boiler 9 are not creditable because the Applicant previously sold all future allowances for the boiler. Sierra Club cited to a 2005 letter from Richard Hyde, Director of the Air Permits Division concerning the sale of allowances. In addition, Sierra Club stated that reductions relied on by the state to demonstrate attainment or reasonable further progress are not creditable and Texas has already relied on significant NO_x reductions from Boiler 9 to demonstrate attainment with the ozone NAAQS.

Sierra Club also stated that the emissions reductions are not federally enforceable at the time the Applicant begins construction of its expansion project because Draft Permit No. 46426 allows the Applicant to continue to operate Boiler 9 for 180 days after the completion of the construction of its new boiler and its VAU debottleneck project. Sierra Club stated that in accordance with 30 TAC § 116.12(22)(C)(ii), emission reductions are only creditable for purposes of avoiding major NSR if it is federally enforceable at and after the time that actual construction of the particular change begins. Sierra Club stated that because Boiler 9 will continue to operate and emit NO_x after portions of the expansion project have been completed, the NO_x emission reductions resulting from the subsequent shutdown of Boiler 9 are not enforceable at the time construction of the expansion project begins. Sierra Club stated that even if it's temporary, the continuing operation of Boiler 9, along with proposed boiler 12 and other NO_x emitting facilities will exacerbate existing non-compliance with the ozone NAAQS. In addition, Sierra Club stated that continued operation of Boiler 9 after operation of newly constructed or modified facilities may also result in violations of other NAAQS, such as those for PM₁₀ and PM_{2.5} and that these emissions were not included in the air quality impacts analysis.

(Air Alliance Houston, Sierra Club, Simone Kern, Stephanie Thomas)

RESPONSE 7: The BD Expansion project triggered Nonattainment New Source Review (NNSR) permitting requirements for volatile organic compounds (VOC). In addition, the project triggered Prevention of Significant Deterioration (PSD) permitting requirements for particulate matter (PM) including PM₁₀ and PM_{2.5}, and Greenhouse Gases (GHG).

All other pollutants, including NO_x emissions, were below the applicable significance threshold. In connection with the BD Expansion Project, the Applicant proposed to amend Permit No. 46426 to authorize the construction of a new boiler (Boiler 12) and the shutdown and decommissioning of an existing boiler (Boiler 9).

The Applicant performed contemporaneous netting to demonstrate that the net emissions increase for NO_x emissions from the project is below the significant emissions rate (SER) and therefore not subject to major NSR. The determination of the baseline actual emissions was not based on the age of the unit. The Applicant initially used Boiler 9 NO_x emissions from 2017 and 2018, as they were reported to the Emissions Inventory (EI), to calculate baseline actual emissions. The Applicant initially proposed a 398.56-ton NO_x emissions decrease from the shutdown of Boiler 9. However, in a subsequent revision to its application, the Applicant revised the calculated baseline emissions for NO_x. Specifically, the Applicant represented that it had identified an analyzer issue that affected the Boiler 9 NO_x baseline emission calculations for 2017 and 2018. The Applicant represented that the analyzer issue was corrected and re-calculated the baseline actual emissions from Boiler 9. The updated calculations reflected a corrected NO_x emissions decrease of 282.90 tons for Boiler 9.

The Executive Director reviewed the May 31, 2005 letter from Richard Hyde, Director of the Air Permits Division provided by Sierra Club and determined that it was not relevant to the netting demonstration conducted by the Applicant. Specifically, the letter concerns the application to transfer the ownership of MECT allowances under the Mass Emissions Cap and Trade (MECT) Program. The MECT Program³ is a market-based case-and-trade program that implements an annual NO_x emission cap for applicable facilities in the Houston-Galveston-Brazoria ozone nonattainment area. Program participants are required to use allowances or discrete emission credits to cover NO_x emissions on an annual basis. The allowances available for use each year are capped at a level necessary to attain the NAAQS for ozone. The sale of allowances under the MECT program does not conflict with netting demonstrations. In addition, the Applicant took credit for the shutdown of Boiler 9 in its netting demonstration and did not rely on MECT allowances. Concerning net emissions increases, the TCEQ rules provide that that an increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days. *See* 30 TAC § 116.12(22)(D). In response to the comment, Special Conditions 6.E was added to Permit 46426 in order to clarify the limits of the shakedown period. Special Condition 6.E reads as follows:

Boiler 9 may operate during the Boiler 12 shakedown period. The shakedown period shall begin with the initial start-up of Boiler 12, and end either 180 days following start-up of Boiler 12, or upon completion of stack sampling required under Special Condition No. 10, whichever is

³ More information about the MECT Program is available on the TCEQ's website at https://www.tceq.texas.gov/airquality/banking/mass_ect_prog.html.

sooner.

The emission reductions associated with the decommissioning of Boiler 9 will be federally enforceable upon issuance of the permit. The Applicant is allowed a 180-day period for shakedown of the new boiler, after which Boiler 9 is no longer allowed to operate. This 180-day shakedown period is itself federally enforceable. In addition, the air dispersion modeling accounted for this scenario and, as detailed in Response 4, the emissions met the NAAQS.

Additionally, a second Special Condition relating to the enforceability of the reductions was added to the draft permit Nos. 46426, 22052, and 46307 in response to this comment. Specifically, new Special Condition states:

This permit is conditioned on the completion of all emission reduction projects represented in the most recent Table 3F, Project Contemporaneous Changes, submitted for the amendment with the PI-1 dated March 5, 2020. This reduction of emissions shall occur not later than the commencement of operation of the permitted facilities represented by this permit. The holder of this permit shall maintain records of the emission reductions and provide access and/or copies upon request to the TCEQ Executive Director, or representatives, or any local air pollution control program having jurisdiction. Construction of these facilities must commence as defined in 40 CFR 52.21(b)(9) Prevention of Significant Deterioration or 40 CFR 51.165(a)(1)(xvi) (nonattainment) no later than five years after the reductions are actually accomplished, or the above reductions are no longer creditable and the permit is automatically void.

COMMENT 8: BACT / LAER

Sierra Club questioned the control technology proposed in the application, as well as questioned whether Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) requirements have been met.

Sierra Club stated that the Applicant proposed good combustion practices and the use of an oxidation catalyst to achieve a 99.99% destruction efficiency (DRE) for VOC emissions as LAER for Boiler 12. Sierra Club expressed concern that the Applicant has not provided a basis for this proposed level of control or explained how it will meet the proposed DRE across all operating scenarios. They also commented that the Applicant should be required to provide information about the level of control achieved by good combustion practices alone and the additional level of control provided by the proposed oxidation catalyst. Sierra Club stated that if the Applicant relied upon a manufacturer guarantee, the permit must include the operating conditions and the emission factors specified in the guarantee and should be subject to verification.

Sierra Club stated that the Applicant proposed an emission rate of 0.0075 lb/MMBtu as BACT for filterable PM based on the AP-42 emission factor for total PM emissions from

sources combusting natural gas. Sierra Club expressed concern that the proposed BACT does not represent the highest level of emission reduction achievable demonstrated by other similar units reflected in the RBLC which are subject to much lower limits. Sierra Club stated that according to the application index listing these units, none of the sources with lower limits utilize add-on controls to comply with the limits. The commenters stated that the Applicant has not explained why it cannot comply with lower limits established in permits for similar sources and unless evidence is produced to demonstrate why lower limits are not achievable, the BACT should be no less stringent than the lowest limit revealed in the RBLC search. Sierra Club also commented that the emission factor the Applicant relied upon in its BACT analysis is for total PM and not filterable PM and thus is not a proper basis for determining BACT for filterable PM. In addition, Sierra Club stated that the Applicant has not demonstrated that the AP-42 emission factor for total PM reliably indicates the best achievable level of control for PM and is an appropriate basis for establishing BACT for this project.

In addition, Sierra Club commented that because PM emissions limits are being relaxed, BACT applies to the source as though construction had not yet commenced on the source or modification. Accordingly, Sierra Club stated that the BACT analysis may not consider any additional costs resulting from the retrofitting of new controls onto existing units. Sierra Club stated that the Applicant proposed three technically feasible control technologies but stated that each should not be required because they are too expensive. Sierra Club stated that they were unable to review the Applicant's rationale for this claim because the Applicant marked the information "confidential" and expressed concern that the BACT analysis was deficient.

Sierra Club also expressed concern that Leak Detection and Repair (LDAR) programs, like 28LAER, alone do not satisfy LAER. Specifically, the commenters stated that LAER should include a set of technologies that eliminate fugitive VOC emissions to the greatest extent practicable, using measures such as sealless pumps and compressors and leakless valves in every technically feasible instance. Sierra Club stated that these technologies should have been considered in the LAER analysis. The commenters also expressed concern that the LDAR programs mandated by draft Permit Nos. 46307 and 22052 rely on human beings to properly implement a monotonous, repetitive, and tedious set of measurements at hundreds or thousands of individual components in a single day. Thus, the commenters stated that LDAR programs are often far less effective at identifying and controlling fugitive emissions. Sierra Club stated that even if an LDAR program is selected as BACT, it should be supplemented using surveillance tools, like optical gas imaging.

(Sierra Club, Stephanie Thomas)

RESPONSE 8: 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 an add-on control technology, design considerations, the implementation of work practices, or operational limitations.

The TCEQ 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 paragraphs:

- **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.

Nonattainment permits must include a Lowest Achievable Emission Rate (LAER) analysis, 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. Because these projects are subject to NNSR or PSD (*see* Response 7 regarding federal applicability), LAER is applicable.

The Applicant conducted a LAER evaluation for all sources of VOC emissions and a Tier I BACT evaluation for all sources of other air contaminants and represented in the permit application that BACT and LAER will be used. The use of appropriate control measures will decrease the amount of air contaminants emitted into the atmosphere by this plant. The permit reviewer reviewed the proposed controls and determined that they met Tier I BACT and LAER as appropriate.

VOC emissions will be generated from the boiler as a product of combustion and un-combusted fuel gas. The proposed boiler will have a heat input of 664 MMBtu/hr and will be fired by natural gas, fuel gas, or a combination of natural gas and fuel gas. The boiler is also used to control VOC emissions from process vents that are routed to the fuel gas system. Process vents associated with new equipment are being authorized concurrently under Permit No. 46307. The Applicant represented it would use good combustion practices and an oxidation catalyst to achieve a 99.99% destruction and removal efficiency (DRE) for VOC. A DRE of 99.99% has been identified as LAER for this source category.

In accordance with 30 TAC § 116.116, an applicant is bound by its representations in the application and those representations become an enforceable part of the permit. In addition, the Applicant will be required to perform initial stack sampling and to use a continuous emissions monitoring system (CEMS) to establish the actual pattern and quantities of air contaminants emitted from the boiler in order to demonstrate compliance with all emission limits established in the permit.

The Applicant proposed Tier I BACT for PM, which is good combustion practices and use of gaseous fuel. While the Applicant discussed an emission factor in the BACT analysis section of its initial application, Tier I BACT for particulate matter is not based on an emission factor. Additionally, the Applicant subsequently updated its application and corrected the reference to "total PM" to "filterable PM." The Applicant specified a cost per ton of various add-on control technologies which the TCEQ does not consider technically feasible or economically reasonable. However, the Executive Director did not consider these costs relevant to the review process because the boiler is proposed to meet Tier I BACT. See Response 5 concerning the proposed increase in PM emissions limits and Response 10 concerning confidential information.

The Applicant proposed the use of the 28LAER Fugitive LDAR program as LAER for fugitive emissions. The 28LAER Fugitive LDAR program is considered LAER. While new OGI options are currently being evaluated and studied by the TCEQ, they have not been proven to achieve a more stringent emission rate for this source class. The 28LAER LDAR program currently represents LAER for monitoring fugitive VOC emissions in this industry.

COMMENT 9: Permitting Process

Commenters expressed concern with the permitting process. Adrian Shelley commented that the permitting process does not provide a mechanism for the agency to not issue the permit once an application has been deemed complete. Juan Parras expressed concern with statements indicating that the benefits of the proposed project

outweigh the environmental and social costs. Mr. Parras expressed concern that TCEQ is looking out for big business instead of protecting concerned citizens who are impacted by poor air quality. Sierra Club commented that TPC failed to demonstrate that the environmental costs and social costs of this project are substantially outweighed by its benefits. (Sierra Club, Jessie Casteel, Juan Parras, Susan Rogers, Adrian Shelley)

RESPONSE 9: The TCAA states that “before work is begun on the construction of a new facility or a modification of an existing facility that may emit air contaminants, the person planning the construction or modification must obtain a permit from the commission.” TCAA § 382.0518(a) (Preconstruction Permit).

The Air Permits Division staff conducted a thorough review of these permit applications to ensure they meet the requirements of all applicable state and federal rules and regulations. The first step of the application review process is an administrative review which verifies the following:

- The correct application was submitted;
- The application form and TCEQ Core Data Form have been signed by the Responsible Official;
- The company is an entity legally entitled to do business in Texas;
- The information is accurately recorded in the TCEQ's Central Registry;
- The appropriate application fee was received;
- The mailing addresses for the company and site are USPS validated; and
- There are no delinquent fees owed by the company.

Additionally, the administrative reviewer completes the draft first public notice package. Once a project is declared administratively complete, applicants must publish the first public notice (Notice of Receipt of Application and Intent to Obtain Air Permit) and ensure that a copy of the administratively complete application is made available for public review.

The air quality permit application then undergoes a technical review.

TCAA § 382.056(f) requires the Executive Director to conduct a technical review of and issue a preliminary decision on applications. During the technical review, the permit reviewer evaluates the following:

- All sources of air contaminants at the proposed or existing facility have been properly identified;
- Appropriate controls have been proposed for each emission source, including Best Available Control Technology (BACT) at a minimum;
- Emission calculations have been completed correctly using an approved methodology and appropriate emission factors;
- Proposed emissions meet applicable state and federal standards to be

- considered protective;
- Compliance history for the site and the applicant; and
- Public notice requirements are fulfilled.

Once all emission rates have been verified, the draft permit is created. The draft permit includes a Maximum Allowable Emissions Rate Table (MAERT) which limits the quantity of emissions an applicant can emit into the atmosphere. The emissions tabulated in the MAERT are also used as the input for the air dispersion modeling evaluation to determine if any adverse effects to public health, welfare, or physical property are expected to result from the proposed emissions. The draft permit also includes the operational representations which are documented in the draft Special Conditions and are the basis upon which the emissions were determined.

For nonattainment permit applications, applicants must conduct an analysis of alternative sites, sizes, production processes, and control techniques for the proposed source. The analysis must demonstrate that the benefits of the proposed location and source configuration significantly outweigh the environmental and social costs of that location. *See* 30 TAC § 116.150(d)(4). The Applicant represented that the BD Expansion project will generate new jobs and generate additional income in the area, and that existing infrastructure at the site will minimize the environmental impacts as compared to building a new facility in another area. Therefore, the Executive Director determined that the Applicant demonstrated the benefits of the proposed project significantly outweigh the environmental and social costs associated with its location as required by 30 TAC § 116.150(d)(4). However, as described in detail in Response 4, the proposed emissions were reviewed and determined to be protective of human health and the environment.

At the conclusion of the technical review, the Executive Director is required by TCAA § 382.056(f) to make a preliminary determination on the application. At this time, the second public notice package is prepared. The Applicant must then publish the second public notice (Notice of Application and Preliminary Decision for an Air Quality Permit) and ensure that the complete application, including any subsequent revisions, and the Executive Director's preliminary decision, the draft permit, and air quality analysis are made available for public review.

As described throughout this Response, both the TCAA and the TCEQ rules provide for an extensive review of the application to ensure that emissions from the proposed facility will not violate the NAAQS and will not be expected to adversely affect human health or the environment. TCAA § 382.0518(b) provides that the TCEQ shall issue the permit if an application demonstrates that the proposed facility will use at least BACT and there is no indication that the emissions from the facility will contravene the intent of the TCAA, including protection of the public's health and physical property.

COMMENT 10: Confidential Information

Sierra Club stated that because emissions limits proposed to be authorized will be applicable requirements for purposes of Title V, they must be federally enforceable and must be enforceable by members of the public. Accordingly, Sierra Club stated

that emission calculations, operating limitations, and other requirements used to ensure compliance with NSR permit limits must be publicly accessible and not designated confidential. In addition, Sierra Club stated that the Applicant improperly burdened public participation by improperly marking certain portions of its application confidential only to withdraw its claim of confidentiality as the public comment period was close to ending. Specifically, Sierra Club stated that the Applicant improperly marked portions of its BACT analysis confidential. The commenters stated that the Applicant subsequently withdrew its claim of confidentiality in response to their public information request and therefore the material should have been included in the application materials required to be made publicly available.

RESPONSE 10: It is the policy of the state of Texas that each person is entitled, unless otherwise expressly provided by law, at all times to complete information about the affairs of government and the official acts of public officials and employees. TEX. GOV'T CODE § 552.001(a). While public information is available to members of the public at a minimum during the normal business hours of the TCEQ, information that is considered confidential by law is exempt from disclosure requirements. *Id.* At §§ 552.101 and 552.021.

The TCAA provides for confidential treatment of information submitted to the commission if it relates to secret processes, production rates, or methods of manufacture or production and is identified as confidential when submitted. *See* TCAA § 382.041(a). TCEQ rules also specify procedures for the handling of information claimed to be confidential. *See* 30 TAC § 1.5(d). An applicant may request that submitted information be designated as confidential. Regardless of whether the Executive Director agrees with an applicant's requested confidential designation, if the agency receives an open records request for the information marked confidential by an applicant, the agency may not release the information without first submitting a request to the Texas Attorney General. The Attorney General will determine whether the requested information is subject to an exception to disclosure and whether the information must be withheld or disclosed to the requestor.

The TCEQ received two public information act requests for access to the information the Applicant marked confidential. The TCEQ did not take a position on whether the information at issue was excepted from disclosure. Rather, the TCEQ submitted requests to the to the Texas Attorney General and notified the Applicant of the request for information and of its right to submit arguments as to why the submitted information should not be released. The Attorney General subsequently released opinions which determined that the Applicant demonstrated that the information at issue constituted trade secrets and that the information must be withheld.

COMMENT 11: Monitoring and Testing Requirements

Sierra Club stated that the permits must include monitoring and testing requirements sufficient to assure compliance with the proposed BACT/LAER. Sierra Club asked how the Applicant will demonstrate compliance with the level of control proposed for Boiler 12 authorized in Permit No. 46426. Sierra Club also stated that the permit must

specify operating requirements and monitoring methods to ensure the proposed 99.99% DRE for VOC emissions from Boiler 12 is achieved. Finally, the commenters stated that if direct continuous monitoring of VOC emissions from Boiler 12 is technically feasible and economically reasonable, the Executive Director should include it as a requirement in the permit.

RESPONSE 11: The Special Conditions in the draft permits contain detailed monitoring requirements. A complete listing of periodic monitoring requirements is contained in the draft permits. In addition, the draft permits specify applicable recordkeeping requirements to demonstrate compliance with the emission limitations set forth in the permits. These records must be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction. For Boiler 12, Permit No. 46426 requires initial stack sampling to confirm the 99.99% DRE for the unit. In addition, NO_x and CO emissions will be monitored through the use of a continuous emissions monitoring system (CEMS).

COMMENT 12: Wastewater Treatment Plant VOC Emissions

Sierra Club stated that the Applicant requested authorization to double the amount of VOC that may be emitted from its wastewater treatment plant but represented that the increase is not related to this project and is not due to any physical or operation change and is therefore not a modification subject to nonattainment control requirements. Sierra Club stated that this is an unsupported claim and is insufficient to establish that the wastewater treatment plant is not being modified. The commenters stated that according to TCEQ's federal NSR netting guidance, a facility does not need to be physically touched for a modification to occur, but the relaxation of a federally enforceable emission rate or restriction is sufficient to establish that a facility has been modified. Sierra Club stated that the application indicated that changes to the amount and concentration of certain contaminants the wastewater treatment plant is authorized to process have been requested to accommodate the expansion project. Accordingly, the commenters stated that it appears the wastewater treatment plant will be modified as part of this project and that resulting VOC emissions trigger NNSR requirements, including LAER and emissions offset requirements. In addition, Sierra Club stated that the application did not provide sufficient details concerning the various wastewater treatment plant operating scenarios the Applicant seeks to authorize. Specifically, the commenters stated that the Applicant seeks to authorize five different operating scenarios and must provide more information about each operating scenario, explain why emissions for each scenario vary, how each scenario relates to the proposed expansion project, and demonstrate that each scenario will comply with applicable pollution control requirements.

RESPONSE 12: The Applicant initially proposed to increase the maximum allowable emission rates for the aerations ponds/clarifiers and the oil-water separator associated with its wastewater treatment plant. The Applicant represented that the increases were not related to the BD Expansion project and were not due to any physical or operational change and were therefore not a modification subject to nonattainment

control requirements. However, the Applicant subsequently updated its application and represented that it had re-assessed its historical sampling data and constituents which identified that the sampling results for certain constituents did not represent normal operations at the facility. The Applicant withdrew the portion of the amendment requesting changes to its wastewater treatment facility. Accordingly, none of the currently authorized emission rates associated with the wastewater treatment plant will change as a result of this project.

COMMENT 13: Maintenance, Startup, and Shutdown for Boiler 12

Sierra Club expressed concern that that none of the applications requested authorization for emissions from Boiler 12 during planned maintenance, startup, and shutdown (MSS) activities. Sierra Club stated that the boiler will require intermittent maintenance and will periodically need to be shut down and restarted. The commenters expressed concern that these activities may diminish the effectiveness of the control measures that apply during routine operations. In addition, Sierra Club stated that if Boiler 12 will not achieve the same requirements that apply during periods of routine operation during MSS activities, the application must make this clear and the permit must authorize the non-routine activities.

RESPONSE 13: The Applicant did not initially propose to authorize MSS emissions for Boiler 12. However, the Applicant subsequently updated its application to propose authorization for MSS activities for Boiler 12. The Applicant provided calculations, a BACT review, and an updated impacts review for these emissions.

Emissions during planned MSS will be authorized by Permit No. 46426 provided the facilities and emissions comply with the applicable limits in the Maximum Allowable Emission Rate Table (MAERT) and the Special Conditions. Emissions during planned MSS activities must be minimized by operating the facility and associated control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.

Permit 46426 Special Condition 22 requires that during planned MSS, emissions from the authorized boilers must be minimized by limiting the duration of operation in planned MSS mode as follows:

- A. A planned startup is defined as the period that begins when a flame is established in the boiler and ends when the boiler begins to produce steam at a rate of 120,000 lbs/hr or greater. A planned "warm" startup is limited to 360 minutes. A planned "cold" startup is limited to 900 minutes.
- B. A planned shutdown is defined as the period that begins when the production of steam falls below 120,000 lbs/hr and ends when there is no longer a flame present in the boiler. A planned shutdown is limited to 360 minutes.

The permit holder must also keep records of periods of startup and shutdown for the boilers and of the NO_x and CO emissions associated with startup and shutdown as

determined by the continuous emissions monitoring system (CEMS) for each boiler.

COMMENT 14: Permit No. 22052 Special Condition 2

HCPCS commented that Special Condition 2 should require record keeping of any releases directly to the atmosphere of gases containing VOC at a concentration greater than 1 weight percent from relief valves, safety valves, or rupture of discs.

RESPONSE 14: 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. These emissions, should they occur, are unauthorized, are required to be recorded, and may be required to be reported under 30 TAC § 101.201.

COMMENT 15: Permit No. 22052 Special Condition 9

HCPCS commented that Special Condition 9 does not specify the applicable requirements for the Thermal Oxidizer (EPN DOCK-TO) that will replace the existing dock flare (EPN E-563).

RESPONSE 15: The Applicant proposed to authorize a new thermal oxidizer to replace the existing dock flare. The requirements applicable to the thermal oxidizer are contained in Special Condition Nos. 13-16.

COMMENT 16: Permit No. 22052 Special Condition 23

HCPCS stated that Special Condition 23 requires the permit holder to offset the project emission increases. However, HCPCS stated that there should be contingencies in place to revoke the permit if the permit holder is unable to offset the emissions.

RESPONSE 16: Special Condition No. 23 states that 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. Accordingly, if the appropriate offsets are not obtained, the Applicant may not commence operations.

COMMENT 17: Permit No. 46426 Special Condition 2

HCPCS commented that Special Condition 2 should require record keeping of any releases directly to the atmosphere of gases containing VOC at a concentration greater than 1 weight percent from relief valves, safety valves, or rupture of discs.

RESPONSE 17: Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration of greater than 1 percent are not authorized by Permit No. 46426. Any such releases are not consistent with good practice for minimizing emissions. These emissions, should they occur, are unauthorized, required to be recorded, and may be required to be reported under 30 TAC § 101.201.

COMMENT 18: Permit No. 46426 Special Condition 12

HCPCS expressed concern that the language in Special Condition 12 that requires that any emission monitor be repaired or replaced as soon as reasonably possible is weak. HCPCS stated that this condition should include a specific time limit.

RESPONSE 18: Monitors required by this permit are the CEMS and PEMS (predictive emissions monitoring system) for the boilers. Special Condition 11.A requires that any CEMS downtime be reported semi-annually to the appropriate TCEQ Regional Director and that corrective action be taken. Special Condition No. 15.E similarly requires the Applicant report PEMS downtime to the appropriate TCEQ Regional Director within three days of any downtime and that necessary corrective action be taken. This condition has been developed by the TCEQ for use in permits that require monitors to be installed. Special Condition 12 provides the permit holder a reasonable amount of time to take corrective action if any emission monitor fails to meet its specified performance and is regularly used in similar permits issued by the TCEQ. Failure to take corrective action within a reasonable time may be deemed a violation of the permit.

COMMENT 19: Permit No. 46426 Special Condition 14

HCPCS commented that this condition contains a typo. Specifically, HCPCS stated that the condition referenced required CEMS data in Special Condition 12 but should reference Special Condition 11.

RESPONSE 19: Special Condition No. 14 should have referenced Special Condition 11 instead of Special Condition 12. The draft permit was updated to correct this error in response to the comment.

COMMENT 20: Permit No. 46426 MAERT/ Boiler 9 (EPN: EP-H9)

HCPCS commented that Boiler 9 is still listed on the MAERT for Permit No. 46426, but it should be removed since this unit will be decommissioned.

RESPONSE 20: Boiler 9 is required to be listed on the MAERT in the draft permit because Boiler 9 may be operated until the BD expansion project commences operation. See Response 7 concerning the shakedown period for Boiler 9.

COMMENT 21: Permit No. 46307 Special Condition 11

HCPCS commented that Special Condition 11 requires throughput records to be maintained on a rolling 12-month basis but does not require recordkeeping for loading activity associated with Tanks T-103, T-114, and T-115. HCPCS stated that records should also be required for each loading activity to demonstrate compliance.

RESPONSE 21: The Applicant did not propose to authorize modification of Tanks T-103, T-114, or T-115 in these projects. Accordingly, changes to the Special Conditions concerning these tanks are outside the scope of the review for this application.

COMMENT 22: Permit No. 46307 Special Condition 23D

HCPCS expressed concern about the requirement in Special Condition 23D requiring the permit holder to identify the source of VOC and repair the equipment at the earliest opportunity upon a reading of VOC concentration greater than 0.042 ppmw in the cooling tower heat exchange system. HCPCS commented that the language in this condition is weak and should instead set a limit on the VOC concentration and specify a due date for repairs. In addition, HCPCS stated that any VOC concentrations exceeding the limit or failing to conduct repairs within a reasonable due date should be a deviation of this permit condition.

RESPONSE 22: The Applicant did not propose to modify the cooling towers identified in Special Condition No. 23.D. Accordingly, changes to these facilities are outside the scope of the review for this project.

COMMENT 23: Permit No. 46307 Special Condition 38

HCPCS commented that Special Condition 38, which authorizes certain temporary facilities, should include a notification process to document when a temporary facility starts and ends. HCPCS stated that while temporary facilities are not authorized over 12 consecutive months, rolling 12-month records are kept on a monthly basis. HCPCS commented that more contingencies should be in place to help ensure temporary facilities are used as intended.

RESPONSE 23: Permit No. 46307 authorizes emissions from certain temporary facilities used to support planned MSS activities. Emissions from temporary facilities are authorized provided the temporary facility does not remain on site for more than 12 consecutive months, is used solely to support planned MSS activities at the permanent site facilities, and does not operate as a replacement for an existing authorized facility. Special Condition No. 38.D requires that records of the date and time of each MSS activity and its duration be maintained. These records in conjunction with the other records required to be maintained are sufficient to demonstrate compliance with the permit.

COMMENT 24: Permit No. 46307 Special Condition 39

HCPCS commented that this condition should require recordkeeping for any direct venting to the atmosphere and VOC partial pressure reading for sub-condition A&B. For sub-condition C, HCPCS stated that records should be kept when liquids are drained into an open pan or sump to ensure compliance with the one-hour limit.

RESPONSE 24: Special Condition 39 in Permit No. 46307 outlines the MSS requirements that apply to process units and facilities, other than tanks. Special Condition No. 38 requires that records be required for all MSS activities, which would include any direct venting of emissions to the atmosphere. Special Condition No. 38.E requires that emissions be estimated using the methods identified in the permit application, which would include VOC partial pressure readings. For Special Condition 39.C, Special Condition 38.D requires that records of the date and time each MSS activity is performed be maintained, which would include when any liquids are drained into an

open pan or sump. These records are expected to demonstrate compliance with both the short-term and long-term emission limitations.

COMMENT 25: Permit No. 46307 Special Condition 47

HCPCS stated that this condition requires the permit holder to offset the project emission increases. However, HCPCS stated that there should be contingencies in place to revoke the permit if the permit holder is unable to offset the emissions.

RESPONSE 25: As described in Response 1, because the proposed project will result in a significant net increase of VOC emissions, those emissions must be offset at a ratio of 1.2 to 1. Special Condition No. 47 states that the 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. Accordingly, if the appropriate offsets are not obtained, the Applicant may not commence operations.

COMMENT 26: Permit No. 19806 Special Condition 17C

HCPCS commented that in addition to the current requirements, Special Condition 17C should require records to be kept of any failed inspections to ensure that they are reported as deviations.

RESPONSE 26: This condition is outside the scope of the project and was not subject to amendment in the draft permit.

COMMENT 27: Permit No. 19806 Special Condition 30

HCPCS commented that in addition to the current requirements, this condition should require record keeping for the SCR bed and of when startup begins and concludes.

RESPONSE 27: The TCEQ rules require permit holders to maintain records containing the information and data sufficient to demonstrate compliance with the permit. See generally 30 TAC § 116.115(b)(2)(E). Special Condition 30 defines startup as the period that begins when fuel is introduced to any combustion source. Ammonia is required to be injected within two hours of SCR bed reaching 450°F to control NO_x emissions. Startup is defined as being concluded once the unit is in production and off-gas has been introduced into the combustion devices. In addition, Special Condition 42.C requires that CEMS emissions data be maintained to demonstrate compliance with the Maximum Allowable Emission Rate Table (MAERT), including during startup.

COMMENT 28: Water Quality

Commenters expressed concern that the proposed projects would negatively affect water quality in the area.

(Annelise Goldman, Alexandria Gordon, Simone Kern)

RESPONSE 28: Although the TCEQ is responsible for the environmental protection of

air and water as well as the safe management of waste, the draft permits will regulate the control and abatement of air emissions only. Therefore, issues regarding water quality are not within the scope of this review. However, the Applicant may be required to apply for separate authorizations for water quality or water usage. As described in Response 4, the secondary NAAQS are set to protect public welfare and the environment and the TPC Houston Plant is not expected to cause an exceedance of the NAAQS. It is the Applicant's responsibility to secure any authorizations necessary for operation of the plant. The issuance of an air quality permit does not negate the responsibility of an applicant to apply for any additionally required authorizations before operating a plant.

This permit does not authorize the discharge of pollution into a body of water. Individuals are encouraged to report environmental concerns, including water quality issues, or suspected noncompliance with the terms of any permit or other environmental regulation by contacting the TCEQ Houston Regional Office at (361) 825-3100 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186. The TCEQ evaluates all complaints received. If the plant is found to be out of compliance with the terms and conditions of the permit, the Applicant may be subject to enforcement action.

COMMENT 29: Compliance History / Emissions Events

Commenters expressed concern about the Applicant's compliance history, stating that it has a history of noncompliance and that the EPA identified the Applicant as a "high priority violator". Commenters stated that the Applicant should not be allowed to expand its plant when it has a track record of illegal polluting and industrial accidents. Sierra Club stated that EPA's ECHO tool indicates that the plant's operations have led to "High Priority Violations" over each of the last 12 quarters. HCPCS commented that a review of the Applicant's compliance history shows a strong pattern of issues relating to emission events, some of which have resulted in formal enforcement actions. HCPCS also expressed concern with the number of emission events at the TPC Houston Plant and commented that this shows the Applicant has a persistent problem with emissions events and unauthorized emissions. HCPCS stated that TCEQ should hold the Applicant more accountable and take compliance history and previous emissions events into consideration prior to authorizing additional emissions for the site.

Emissions Events

Commenters expressed concern that the Applicant has a history of industrial fires, chemical fires, and unauthorized or illegal releases of air contaminants and emissions. Commenters expressed concern regarding recent past upsets and emissions events, explosions, and fires at the Applicant's facilities. Commenters expressed concern that the past explosion released excessive amounts of butadiene, negatively impacting air and water quality. Several commenters expressed concern about emissions released from the Houston Plant during winter storm Uri. Sierra Club stated that the Applicant has an infamous record of recurring non-compliance with environmental requirements. Sierra Club stated that these violations include disasters, such as an explosion at the

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TPC Group LLC, Permit Nos. 22052, PSDTX1578, N286, GHGPSDTX201; 46307, PSDTX1580, N2880, GHGPSDTX202; 46426, PSDTX999M1, N290, GHGPSDTX203; and 19806, PSDTX1586
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Applicant's Port Neches facility in 2019, which forced the sudden evacuation of 50,000 people. Sierra Club also stated that the Applicant has repeated failures to comply with emission control requirements resulting in illegal emissions that have not been demonstrated to be protective of public health. Sierra Club also stated that the Applicant has produced sudden surges of illegal air emissions from its Houston Plant during repeated unauthorized upsets, maintenance activities, startups, and shutdowns. Clara Goodwin commented that the Applicant averages approximately 8 reportable emissions events a year. Ana M. Parras expressed concern about "flaring events" which she stated have been frequent and ongoing for years.

(Air Alliance Houston, HCPCS, Sierra Club, Jessie Casteel, Susan Chadwick, Rebecca Conchos, Barbara G. Corbello, Ashley Ellis, Annelise Goldman, Clara Goodwin, Alexandria Nicole Gordon, Noah Hester, Nalleli Hidalgo, Simone Kern, Simone Kern, Louise Kidder, James Mitchell, Dennis Nance, Nora Olabi, Ana M. Parras, Juan Parras, Susan Rogers, Luis Adrian Ruiz, Adrian Shelley, Carolyn Stone, Hannah Thalenberg, Chelsea Ellen Thomas, Stephanie Thomas, Corey Williams)

RESPONSE 29: The TCEQ defines an upset event as an unplanned or unanticipated occurrence or excursion of a process or operation that results in unauthorized emissions of air contaminants. An upset event that results in unauthorized emissions from an emission point is an emissions event.

With respect to emissions events or spills, 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 emissions in excess of a reportable quantity. The reportable quantity varies based on the air contaminant released. In the event an individual is adversely impacted by air emissions from this or any other facility, they may register a complaint with the TCEQ Houston Regional Office at 713-767-3500 or by calling the 24-hour toll free Environmental Complaints Hotline at 1 888-777-3186. Complaints are addressed in accordance with TCEQ procedures. *See Response 30 concerning Enforcement.*

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. Occasionally a permit application may require a disaster review. Whether a permit application requires a disaster review depends on the chemicals handled, the location of facility, and the processes involved. 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, are candidates for disaster review. None of these applications required a disaster review.

During the technical review of the permit application, a compliance history review of both the company and the site is conducted based on the criteria in 30 TAC Chapter 60. These rules may be found at the following website:

<https://www.tceq.texas.gov/rules/index.html>.

The compliance history is reviewed for the five-year period prior to the date the permit application was received and includes multimedia compliance-related components about the site under review. These components include: enforcement orders, consent decrees, court judgments, criminal convictions, chronic excessive emissions events, investigations, notices of violations, audits and violations disclosed under the Audit Act, environmental management systems, voluntary on-site compliance assessments, voluntary pollution reduction programs, and early compliance. However, the TCEQ does not have jurisdiction to consider violations outside of the State of Texas.

A company and site may have one of the following classifications and ratings:

- High: rating below 0.10 - complies with environmental regulations extremely well;
- Satisfactory: rating 0.10 - 55.00 - generally complies with environmental regulations;
- Unsatisfactory: rating greater than 55.00 - fails to comply with a significant portion of the relevant environmental regulations.

This site has a rating of 23.80 and a classification of Satisfactory. The company has a rating of 17.59 and a classification of Satisfactory. The company rating reflects the average of the ratings for all sites the company owns in Texas.

COMMENT 30: Enforcement

Commenters expressed concern about the TCEQ's enforcement process. Sierra Club stated that TCEQ must require the Applicant to address and correct ongoing violations at its Houston and Port Neches plants. Commenters expressed concern that although the Applicant has paid fines, they never solved the root of their compliance problems and should be forced to fix those first. Rebecca Conchos commented that the amount of money paid in fines compared to how much the companies make doesn't seem significant enough. Ms. Conchos also expressed concern that enforcement relies on complaints or upset events, stating that it doesn't seem like the enforcement process is invested in understanding the human cost of environmental noncompliance. Susan Rogers expressed concern that the Applicant will exceed the emission limits of its permit over the weekend when the TCEQ is closed. Clara Goodwin commented that TCEQ should be suing TPC for current violations.

(Sierra Club, Rebecca Conchos, Annelise Goldman, Clara Goodwin, Susan Rogers, Carolyn Stone)

RESPONSE 31: There are a number of mechanisms by which the TCEQ monitors compliance with permit conditions and state and federal regulations. To the extent that personnel, time, and resources are available, the TCEQ investigates permit operations to ensure compliance with applicable rules and regulations. Although specific to each site, investigations generally explore the entire operation of the plant. The investigation schedule may be increased if violations are found, repeated, or if a regulated entity is classified as an unsatisfactory performer.

The TCEQ regional offices prioritize their responses to complaints based on the potential for adverse health effects associated with the alleged violation. For example, a "priority one" case means serious health concerns exist, and the case will be investigated immediately. A "priority four" case, on the other hand, means no immediate health concerns exist; therefore, it will be investigated within 30 days.

Staff from the TCEQ regional office review all complaints and regional investigations are not limited by media. Complaints regarding regulated entities may be addressed to the TCEQ Houston Regional Office at 713-767-3500 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.

Violations are usually addressed through a notice of violation letter that allows the operator a specified period of time within which to correct the problem. The violation is considered resolved upon timely corrective action. A formal enforcement referral will be made if the cited problem is not timely corrected, if the violation is repeated, or if a violation is causing substantial impact to the environment or neighbors. In most cases, formal enforcement results in an agreed enforcement order including penalties and technical requirements for corrective action. Penalties are based upon the severity and duration of the violation(s). Violations are maintained on file and are included in the calculation of a facility and a person's compliance history. Compliance history ratings are considered during permit application reviews. As described above, the Applicant submitted the DH2 Heat Recovery project, in part, to comply with a Compliance Assurance Plan.

Generally, administrative and civil penalties in the amount of \$0-10,000 and \$50-25,000 respectively, maybe assessed for violations of the TCEQ rules. *See* TEX. WATER CODE Ch. 7. However, the specific penalties associated with each violation will be determined on a case-by-case basis according to the TCEQ Penalty Policy. First, the commission will evaluate the penalty based on the size of the respondent's (i.e. alleged violator) site. For example, any stationary facility that has the potential to emit more than 100 tons per year of any air pollutant is classified as a "major source." Second, the "harm" is categorized as major, moderate, or minor, according to the "Environmental/Property and Human Health Matrix." The harm classification is based on whether an "actual" or "potential" release of contaminants occurred. Third, additional factors including compliance history, repeat violations, culpability, and whether there was a good faith effort to comply with regulations, will be assessed and will influence the overall amount of the penalty. In addition, any economic benefit or monetary gain derived from a failure to comply with TCEQ rules or regulations will be considered and may increase the penalty. The final penalty amount will be checked against the minimum and maximum penalty amounts allowed by law, per day of violation, in order to obtain the final assessed penalty. Additional information about the TCEQ penalty policy may be obtained from the TCEQ website, Penalty Policy of the Texas Commission on Environmental Quality, available at <http://www.tceq.texas.gov/publications/rg/rg-253.html>.

COMMENT 31: Location

Commenters expressed concern regarding the location of the plant, specifically its proximity to residences, public areas, and schools. Nalleli Hidalgo commented that the facility should be relocated so its furthest away from communities and schools. Ana M. Parras commented the nearby neighbors are sick and afraid of the consequences of living so close to a facility that has frequent flares and emissions events, but they cannot afford to move. Mrs. Parras also stated that Cesar Chavez High School is near this plant in the "Near Zone" for death, injury, or bodily harm.

(Jose Alonso, Nalleli Hidalgo, Simone Kern, Ana M. Parras, Susan Rogers, Hannah Thalenberg, Chelsea Ellen Thomas)

RESPONSE 31: The TCEQ's jurisdiction for air quality permitting is limited to the issues set forth in the TCAA Chapter 382. Accordingly, the TCEQ does not have authority to regulate or consider potential effects on land use 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. As described in more detail in Response 4, both the TCAA and the TCEQ rules provide for an extensive review of the application to ensure that emissions from the plant will not cause or contribute to an exceedance of the NAAQS or adversely affect human health or the environment.

COMMENT 32: Environmental Justice

Commenters expressed concern that the proposed projects would have negative environmental justice implications. Commenters stated that the proposed project will affect people of low-income or people of color who are being targeted and will suffer the most. Sierra Club stated that the areas near the plant have been recognized by EPA as predominantly minority communities that face a disproportionately high risk of exposure to sources of industrial pollution. Sierra Club stated that a misleading public notice and improper claims of confidentiality such that not all information was readily available, in combination with language barriers, made public participation by communities of color more difficult. Air Alliance Houston commented that TCEQ should protect the health and safety of the working-class communities of color that live within three miles of the plant and are already overburdened with air pollutants. Jose Alonso commented that facilities in the area affect minorities more than wealthy white people. Clara Goodwin commented that a Title VI investigation should be undertaken to ensure that TCEQs permitting decisions are not discriminatory in violation of the Civil Rights Act of 1964.

(Air Alliance Houston, Sierra Club, Jose Alonso, Clara Goodwin, Nalleli Hidalgo, Simone Kern, Ana M. Parras, Juan Parras, Adrian Shelley, Corey Williams)

RESPONSE 32: 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. A health effects review was conducted for the proposed project during the technical review and the permit was found to be protective of human health

and the environment.

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 involve human health or the environment operate without discrimination and to ensure that concerns are considered thoroughly and are handled in a way that is fair to all. The Office of the Chief Clerk may be contacted at 512-239-3300 for additional information. More information on Environmental Equity, including information on non-discrimination requirements for participation in programs and processes, how to report concerns, request accommodations, and be involved in agency decision making may be found on the TCEQ website: <https://www.tceq.texas.gov/agency/decisions/participation/title-vi-compliance>. See Response 1 concerning the public notice and Response 10 concerning confidential information.

COMMENT 34: Corporate Profits

Commenters questioned the corporate profits that would be made from this project and expressed concern that they would come at the cost of the surrounding community. Leah Binkovitz commented that the health of the communities should not be sacrificed for profits. Susan Rogers commented that the TCEQ is sacrificing human lives for the benefit of corporations. Ana M. Parras asked TCEQ to stop helping the Applicant poison people for profit.

(Leah Binkovitz, Edward Santos Garza, Dennis Nance, Ana M. Parras, Juan Parras, Susan Rogers)

RESPONSE 34: The TCEQ is not authorized to consider a company's financial status nor its profits in determining whether a permit should be issued. TCEQ's review of this company's applications included analysis of health impacts and application of best available control technology (BACT). Based on this review, the plant should comply with all applicable health effects guidelines and emission control requirements. Continued compliance with health effects guidelines and BACT requirements is expected if the company operates in compliance with the permit terms and conditions. Individuals are encouraged to report any environmental concerns at the facility by contacting the TCEQ Houston Regional Office at 713-767-3500 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186. The TCEQ evaluates all complaints received. If the facility is found to be out of compliance with the terms and conditions of the permit, it will be subject to possible enforcement action.

COMMENT 35: TCEQs Responsibility/ Public Opposition and Support

Commenters asked that the TCEQ consider residents and their wishes and choose not to approve the proposed expansion for the plant. Commenters state that TCEQ has a duty to ensure the community is protected. Susan Rogers commented that she does not trust TCEQ to protect lives of the community, further commenting that TCEQ is not protecting residents. Juan Parras commented that the TCEQ looks out for business

interests rather than implementing its mission statement.

(Jose Alonso, Leah Binkovitz, Susan Chadwick, Molly Claire Cook, Barbara G. Corbello, Ashley Ellis, Edward Santos Garza, Annelise Goldman, Clara Goodwin, Alexandria Nicole Gordon, Noah Hester, Simone Kern, Louise Kidder, James Mitchell Luis, Dennis Nance, Nora Olabi, Ana M. Parras, Juan Parras, Ana Parras, Susan Rogers, Adrian Ruiz, Adrian Shelly, Hannah Thalenberg, Chelsea Ellen Thomas, Corey Williams, Raquel Willis)

Some commenters expressed support for the proposed project expansion.

(Frances Castaneda Dyess, Howard F. Guzman, Eileen Puente)

RESPONSE 35: The TCEQ appreciates the comments and interest from the public in environmental matters before the agency and acknowledges the comments in opposition and support of the projects. The TCAA establishes the TCEQ's jurisdiction to regulate air emission in the state of Texas. Accordingly, the Executive Director's staff has reviewed the applications in accordance with the applicable state and federal law, policy and procedures, and the agency's mission to protect the state's human and natural resources consistent with sustainable economic development. 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.

CHANGES MADE IN RESPONSE TO COMMENT

The following changes to the draft permits have been made in response to comment or to correct typographical errors:

Permit No. 22052

- Special Condition 6.B was amended to correct a typographical error.
The leak definition level for identifying leaking or damaged valves, connectors, compressor seals, pump seals, and agitator seals found to be emitting VOCs in Special Condition No. 5H shall be 250 ppmv instead of the applicable ~~500~~250-ppmv.
- Special Condition 9.B was amended to correct a typographical error.
Controlled loading of MTBE/ETBE and diisobutylene (DIB) into ships and barges with the vapors collected and sent to the Marine Loading Flare (EPN E-563). The vapor capture system shall be 100 percent efficient in the collection of the vapors during vacuum operation and ~~99.995~~99.995% efficient during non-vacuum inert vessel operation. The flare shall operate with a destruction efficiency of 98 percent prior to the start of operation of the Thermal Oxidizer. After the start of

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TPC Group LLC, Permit Nos. 22052, PSDTX1578, N286, GHGPSDTX201; 46307, PSDTX1580, N2880, GHGPSDTX202; 46426, PSDTX999M1, N290, GHGPSDTX203; and 19806, PSDTX1586
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operation of the Thermal Oxidizer, the Thermal Oxidizer shall comply with the applicable conditions.

- The CO₂e emission rate for Marine loading flare (EPN E-563) in the MAERT table was corrected from 234.93 to 235.04 tpy.
- Special Condition 26 was added to the permit. The new condition reads as follows:

This permit is conditioned on the completion of all emission reduction projects represented in the most recent Table 3F, Project Contemporaneous Changes, submitted for the amendment with the PI-1 dated March 5, 2020. This reduction of emissions shall occur not later than the commencement of operation of the permitted facilities represented by this permit. The holder of this permit shall maintain records of the emission reductions and provide access and/or copies upon request to the TCEQ Executive Director, or representatives, or any local air pollution control program having jurisdiction. Construction of these facilities must commence as defined in 40 CFR § 52.21(b)(9) Prevention of Significant Deterioration or 40 CFR § 51.165(a)(1)(xvi) (nonattainment) no later than five years after the reductions are actually accomplished, or the above reductions are no longer creditable and the permit is automatically void.

Permit No. 46426

- Special Condition 6.E was added to the permit. The condition reads as follows:

Boiler 9 may operate during the Boiler 12 shakedown period. The shakedown period shall begin with the initial start-up of Boiler 12, and end either 180 days following start-up of Boiler 12, or upon completion of stack sampling required under Special Condition No. 10, whichever is sooner.

- Special Condition 14 was amended to correct a typographical error. The condition now reads as follows:

The holder of this permit shall either measure or develop a program to calculate the total mass flow rate through Boiler 10, Boiler 11 and Boiler 12 to ensure continuous compliance with the emission limitations specified in the attached table entitled "Emission Sources-Maximum Allowable Emission Rates." The permit holder shall calculate hourly mass emissions in lbs/hr using the measured or calculated exhaust flow rate and the measured concentrations of NO_x and CO from the CEMS required in Special Condition No. ~~12~~11. The hourly calculated values will be cumulatively added during each hour of the month and stored on a computer hard drive and on computer disk or other TCEQ-

accepted computer media. Records of this information shall also be available in a form suitable for inspection.

- Special Condition 27 was added to the permit. The condition reads as follows:

This permit is conditioned on the completion of all emission reduction projects represented in the most recent Table 3F, Project Contemporaneous Changes, submitted for the amendment with the PI-1 dated March 5, 2020. This reduction of emissions shall occur not later than the commencement of operation of the permitted facilities represented by this permit. The holder of this permit shall maintain records of the emission reductions and provide access and/or copies upon request to the TCEQ Executive Director, or representatives, or any local air pollution control program having jurisdiction. Construction of these facilities must commence as defined in 40 CFR § 52.21(b)(9) Prevention of Significant Deterioration or 40 CFR § 51.165(a)(1)(xvi) (nonattainment) no later than five years after the reductions are actually accomplished, or the above reductions are no longer creditable and the permit is automatically void.

Permit No. 46307

- Special Condition 37 was reverted to its previous state because the Applicant withdrew its request to amend conditions relating to its wastewater treatment plant. The condition now reads as follows:

Wastewater treatment plant emissions shall be estimated every month using the following procedure.

- A. The permit holder shall sample the wastewater prior to the Wastewater Aeration Ponds (EPN: WW-PN) monthly to determine the concentrations of all air contaminants. Sampling locations, sampling procedures, test methods and calculations shall be as specified in permit application, submitted October 1, 2012. The influent wastewater flow rates shall be measured and recorded when a sample required by this condition is collected. Records of sampling results shall be maintained for all air contaminants.
- B. The permit holder shall calculate short term loading rate in terms of pounds per hour (lb/hr) and rolling 12 month loading rate in terms of tons per year (tpy) for each air contaminant. The measured concentrations of each speciated air contaminant shall be converted to an equivalent mass emission rate based upon the flow rates during the sample collection period using the calculation methods and assumptions in the permit application, submitted October 1, 2012. The short-term emission rate calculations for such air contaminants

shall be based on the concentrations and flow rates measured during sampling. The rolling 12-month emission rate calculation for each air contaminant shall be based on the rolling 12 month average contaminant concentration and the rolling 12 month wastewater flow. All other inputs into the calculation shall match those in the permit application for that averaging period (worst case). Total VOC mass emission rates shall be calculated as the sum of the individual speciated VOC mass emission rates.

- Special Condition 50 concerning the enforceability of the NO_x reductions was added to the permit. The new condition reads as follows:

This permit is conditioned on the completion of all emission reduction projects represented in the most recent Table 3F, Project Contemporaneous Changes, submitted for the amendment with the PI-1 dated March 5, 2020. This reduction of emissions shall occur not later than the commencement of operation of the permitted facilities represented by this permit. The holder of this permit shall maintain records of the emission reductions and provide access and/or copies upon request to the TCEQ Executive Director, or representatives, or any local air pollution control program having jurisdiction. Construction of these facilities must commence as defined in 40 CFR 52.21(b)(9) Prevention of Significant Deterioration or 40 CFR 51.165(a)(1)(xvi) (nonattainment) no later than five years after the reductions are actually

accomplished, or the above reductions are no longer creditable and the permit is automatically void.

Respectfully submitted,

Texas Commission on Environmental Quality

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ENVIRONMENTAL QUALITY