



November 27, 2023

Laurie Gharis
Office of the Chief Clerk
Texas Commission on Environmental Quality
P.O. Box 13087, MC 105
Austin, Texas 78711-3087

Via electronic filing

Re: Public Comments and Request for Public Meeting Concerning Draft Federal Operating Permit Renewal No. O1598, for TPC Group LLC's Houston Plant.

Dear Ms. Gharis,

Air Alliance Houston appreciates this opportunity to comment on and request a public meeting concerning draft renewal Permit No. O1598 ("Draft Permit") authorizing operation of TPC Group LLC's ("TPC") Houston Plant in Harris County, Texas. Notice of the Draft Permit was published on October 25, 2023, subject to a thirty-day comment period. Thirty days from October 25, 2023 was Friday, November 24, 2023. Because Friday, November 24th was a legal holiday on which the Office of the Chief Clerk was closed, filing of these comments on November 27th is timely. 30 Tex. Admin. Code § 1.7.¹

I. INTRODUCTION AND REQUEST FOR A PUBLIC MEETING

TPC's Houston Plant is poorly maintained and has repeatedly violated emission limits in its permits and released large amounts of illegal pollution during malfunctions. In 2021 alone, the TCEQ imposed fines on TPC for failing to report nitrogen oxide ("NOx") emission limit violations for its Boiler 11, failing to comply with NOx limits for Boiler 11, failure to maintain information to demonstrate compliance with flare pollution control requirements, failure to comply with NOx emission limits for its Heat Recovery Boiler 1B-505, failure to comply with volatile organic

¹ See <https://hr.sao.texas.gov/Documents/Holidays/Holidays2023.pdf> listing Texas state holidays for Fiscal Year 2023.

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compound (“VOC”) emission limits for its wastewater treatment facility, failure to comply with ammonia limits for its Heat Recovery Boiler 1B-505, and failure to comply with particulate matter emission limits for its Heat Recovery Boilers 1B-505 and 1B-506. *See* TCEQ Agreed Order Nos. 2020-1214-AIR-E, 2019-1365-AIR-E, and 2018-0957-AIR-E. In addition to these violations during routine operation, TPC emitted an additional 122 tons of pollution during breakdowns, startups, and shutdowns at its Houston Plant between 2017 and 2022.

Despite this ongoing noncompliance, TPC received authorization from the TCEQ in 2022 to construct a major expansion at its Houston Plant, which will increase the amount of 1,3-butadiene and other chemicals produced, stored, and loaded there. 1,3-butadiene is a highly explosive chemical known to cause cancer in humans. TPC’s Houston Plant expansion project is intended to replace production capacity lost in 2019 when a 1-3-butadiene leak caused multiple explosions that permanently destroyed all chemical production capacity at TPC’s Port Neches plant. The Port Neches disaster resulted in the unauthorized release of 257,640 pounds of carcinogenic 1,3-butadiene, caused “\$153 million in off-site property damage to nearby homes and businesses,” and “was felt up to 30 miles away.” U.S. Chemical Safety and Hazard Investigation Board, Investigation Report: Popcorn Polymer Accumulation, Pipe Rupture, Explosions, and Fires at TPC Group Chemical Plant Butadiene Unit: Final Report, published December 2022 (“Final Report”) at 6.² Three months after the TCEQ approved TPC’s application to construct its expansion project, EPA and TPC entered into a consent decree addressing noncompliance at the Houston Plant involving the same kinds of conditions that caused the Port Neches explosion. *In the Matter of TPC Group LLC*, Administrative Order on Consent, Docket No. CAA-06-2022-

² Available electronically at: <https://www.csb.gov/file.aspx?DocumentId=6203>

3364.³ TPC's repeated noncompliance in Texas continues to put the public in danger. The TCEQ seemed to acknowledge this problem after the Port Neches explosion when its Executive Director Toby Baker explained:

“Within the last year, I have witnessed an unacceptable trend of significant incidents impacting the Gulf Coast region. While not all emergency events may be prevented, it is imperative that industry be accountable and held to the highest standard of compliance to ensure the safety of the state's citizens and the protection of the environment.”

But this call has gone unheeded by the TCEQ. The TCEQ cursorily dismissed concerns about the safety of TPC's Houston expansion project in light of the Port Neches explosion as beyond its jurisdiction and has failed to impose fines and plant improvements sufficient to deter emission limit violations and emission events at the Houston Plant.

More than 127,000 people live within three miles of TPC's Houston Plant, and nearby neighborhoods are home to multiple schools. According to information that TPC filed with the federal government, an explosion involving just one of several 1,3-butadiene storage tanks at the Houston Plant could have a blast radius of 1.7 miles. More than 48,000 people call this potential blast radius home. Ninety-three percent of those living within one mile of TPC's Houston Plant are people of color. Less than 30 percent of people living within a mile of the Houston Plant are native English speakers and the area experiences elevated levels of asthma, chronic obstructive pulmonary disease, stroke, and heart disease, compared to the Harris County average.

Air pollution from petrochemical plants, refineries, and terminals in the area—including TPC's Houston Plant—contribute to elevated pollution levels and increased negative health impacts that primarily harm people of color. Accordingly, Air Alliance Houston urges the TCEQ to undertake an Environmental Justice review to ensure that renewal of the Draft Permit will not

³ Available electronically at:
[https://yosemite.epa.gov/oa/rhc/epaadmin.nsf/Filings/E0BEEE023E4B0A40852588AF005D1BF7/\\$File/3364.pdf](https://yosemite.epa.gov/oa/rhc/epaadmin.nsf/Filings/E0BEEE023E4B0A40852588AF005D1BF7/$File/3364.pdf)

contribute to ongoing and unacceptable harms to politically underrepresented and physically and psychologically overburdened populations. To this end and to provide the many members of the public exposed to air pollution from TPC's Houston Plant to ask questions of TPC and TCEQ representatives and to provide live, in-person comments on issues related to operation of TPC's Houston Plant, Air Alliance Houston **requests a public meeting regarding the Draft Permit.**

II. DRAFT PERMIT DEFICIENCIES

A. **The Draft Permit fails to identify monitoring, testing, and recordkeeping methods that assure compliance with applicable Permit by Rule ("PBR") requirements for unregistered PBR projects at TPC's Houston Plant.**

Draft Permit, Special Condition No. 28 provides that PBRs listed in the permit's New Source Review Authorization References attachment are applicable requirements. According to this special condition, applicable PBR requirements include those specified by rule as well as "the terms and conditions which include monitoring, recordkeeping, and reporting in ... permits by rule identified in the PBR Supplemental Tables dated July 22, 2022 in the application for project 33608." The PBR Supplemental Tables incorporated by reference into the Draft Permit indicate that TPC has claimed without registering the following PBRs to authorize projects at the Houston Plant: 106.472 (for units T-33, T-34, T-83, T-94, T-100, T-101, T-102, T-105, T-106, T-107, T-108, T-110, T-428, T-910549, T-9203960, 1F-511, 1F-963, 31F-2030, 4F-4473 6F-433, T-73, T-74, 1E-4242, 1F-963, PIBFRAC1, PIBFRAC2, PIBFRAC1LD, PIBFRAC2LD, and PIBWW CaCL2), 106.474 (T-99), 106.476 (Tanks 1 through 29, Tanks 41 through 44, Tanks 49 through 57, T-111, T-112, Tank 186, Tank 850, Tank 851, and MTBE Rail), 106.183 (Lab Blr 1, and Lab Blr 2), 106.263 (Des Vac, 2C CarbRem, Tank 54, T-84, OIL-SEP, DMFWashTow, 45A Maint, 45B Maint, FUG-REGV, and T-46), 106.373 (Tank850 and Tank 851), and 106.371 (F-CT-RENT and C-10).

Each unit authorized by PBR is subject to emission limits in the TCEQ's general PBR rule at 30 Tex. Admin. Code § 106.4(a) as well as limits and operating requirements established by the claimed rule. EPA has repeatedly objected to Texas Title V permits, because they fail to specify monitoring requirements that assure compliance with PBR requirements. To resolve this problem, the TCEQ agreed to require operators to specify monitoring methods sufficient to assure compliance with applicable PBR requirements on a PBR Supplemental Form which would then be incorporated by reference into the relevant Title V permits. This is the PBR Supplemental Table referenced by Draft Permit, Special Condition No. 28.

TPC's PBR Supplemental Table Page 16 through Page 22 identifies monitoring methods for unregistered PBRs at the Houston Plant. This information, however, fails to assure compliance with applicable PBR requirements because it fails to actually explain how compliance with applicable PBR requirements for unregistered PBRs will be determined. Accordingly, the Draft Permit is deficient. 42 U.S.C. § 7661c(a), (c).

The PBR at 106.472 authorizes liquid loading and unloading for railcars, tank trucks, or drums; storage containers, reservoirs, tanks, and change of service of material loaded, unloaded, or stored, so long as no visible emissions result and chemicals stored, loaded, and unloaded are limited to those listed by the rule. This PBR does not include any monitoring provisions or throughput limits to assure compliance with applicable 106.4 emission limits (including potentially applicable major modification thresholds for VOC and NO_x increases). According to TPC's PBR Supplemental Table, the company has claimed without registering the PBR at 106.472 to authorize emissions from 29 different units/activities at the Houston Plant. For each such unit/activity with one exception, TPC's PBR Supplemental Table indicates that compliance with applicable requirements for units authorized by 106.472 will be monitored by "Maintain[ing] Throughput for

Tank” or “Maintain[ing] Throughput for Loading.” The single exception is for unit PIBWW CaCL₂, which TPC will monitor using “Records of Chemical Stored and Throughput.” This monitoring information in conjunction with information in the permit record is not sufficient to assure compliance with applicable PBR limits for units authorized by 106.472 for two reasons. First, the Draft Permit and the record for this renewal project fail to include sufficient information for readers to determine *how* PBR requirements for unregistered 106.472 projects apply to units at TPC’s Houston Plant. The Draft Permit’s failure to provide information necessary to determine how applicable PBR requirements apply to each unit at the Houston Plant renders those requirements not-practically-enforceable. Second, the so-called monitoring methods identified by TPC’s PBR Supplemental Table would be insufficient to assure compliance with PBR requirements for unregistered 106.472 projects even if it were clear how those requirements applied to the relevant units at TPC’s Houston Plant.

According to 30 Tex. Admin. Code § 106.4(a)(2), each facility—or piece of emitting equipment—may be authorized to emit up to 25 tons per year of VOC. But we cannot simply assume that this limit applies to all units at the Houston Plant authorized by 106.472, because some (or all) of the projects authorized using this PBR may have involved multiple units. Multiple units cannot be authorized by PBR at the 25 ton per year VOC limit as part of a single project, because the project would almost certainly constitute a major modification and major modifications may not be authorized by PBR. *Id.* at §§ 106.4(a)(2) (prohibiting use of PBRs to authorize major modifications); 116.12, Table I (identifying significant threshold for major modification determinations as 25 tons per year VOC for severe ozone nonattainment areas, like Harris County). Accordingly, if multiple tanks were authorized as part of a single 106.472 project, then each tank

would need to be subject to a limit less than 25 tons of VOC per year.⁴ Nothing in the permit record for TPC's Title V permit renewal, including TPC's PBR Supplemental Table, indicates whether each of the units at TPC's Houston Plant authorized by 106.472 were authorized individually or as part of a project including multiple units, making it impossible to identify applicable 106.4 emission limits for units at the Houston Plant authorized by unregistered claims of the PBR at 106.472. Accordingly, the Draft Permit fails to explain how these limits apply to units at the regulated source and does not assure compliance with PBR applicable requirements as the Clean Air Act requires. 42 U.S.C. § 7661c(a), (c).

But even if it were clear how 106.4 emission limits applied to each unit authorized by unregistered claims of PBR 106.472 at the Houston Plant, the PBR Supplemental Table incorporated by reference by the Draft Permit would still not be sufficient to assure compliance with applicable PBR requirements. This is so because it is unclear from TPC's application *how* throughput for tanks and loading activities will be maintained, what it even means for throughput to be maintained (there is no throughput limit), how throughput will be monitored, and how throughput will be used to determine compliance with applicable limits. For the remaining unit, PIBWW CaCL₂, which will be monitored by using or maintaining records of chemicals stored and throughput, the same problems apply. Maintenance of those records does not explain how they will be used to determine compliance with applicable limits.

⁴ Indeed, VOC or NO_x project increases exceeding 5 tons per year should not be authorized by PBR in the Houston, Galveston, Brazoria severe ozone nonattainment area. Project increases greater than five tons of VOC or NO_x per year trigger netting requirements to determine whether the project is a major modification, subject to major New Source Review preconstruction permitting requirements. 30 Tex. Admin. Code § 116.150(c)(1) (providing that netting is required for modifications of existing major sources involving a VOC or NO_x emissions increase greater than 5 tons per year in severe ozone nonattainment areas). Authorizations for projects requiring a netting demonstration may only be issued after public notice and an opportunity for public comment, because such demonstrations are "submitted by owners and operators" and the TCEQ's review of such demonstrations is part of "the agency's analysis of the effect of construction or modification on ambient air quality, including the agency's proposed approval or disapproval." 40 C.F.R. § 51.161(a) (providing that State Implementation Plans must provide notice and comment opportunities for projects involving this kind of information).

The PBR at 106.474, used to authorize emissions from one unit at the Houston Plant, applies to hydrochloric acid storage tanks exclusively for the storage of hydrochloric acid with an acid strength of 38% by weight or less, and provides that if acid stored is more concentrated than 20% by weight, the tank vent must be controlled to reduce emissions by at least 99%. According to TPC's PBR Supplemental Table, compliance with 106.4 emission limits and 106.474 concentration and control requirements are monitored by "Maintain[ing] Throughput for Tank." As with the PBR at 106.472, it is unclear how this method assures compliance with applicable requirements: there is no throughput limit in the PBR and it is unclear how maintaining throughput below an unspecified threshold assures compliance with 106.4 emission limits or 106.474 concentration and pollution control requirements.

The PBR at 106.476, used to authorize emissions from 47 units/activities at the Houston Plant, applies to tanks and other containers storing carbon compounds, so long as the tanks and containers either 1) maintain sufficient pressure at all times to prevent vapor or gas loss to the atmosphere or 2) the tank or container is equipped with a relief valve which directs all vapors or gases to an incinerator, boiler, or other firebox having a stationary flue or a waste gas smokeless flare system. Vapors or gases vented to a control must be mixed thoroughly upstream of the control device such that the mixed gases have a minimum net or lower heating value of 200 British thermal units per cubic foot. If a flare is used to control vapors or gases from units authorized by 106.476, such flares must comply with requirements from 106.492 (relating to flares). For all units authorized by unregistered claims of 106.476 except for MTBE Rail, TPC proposes to monitor compliance with applicable PBR requirements using "Records of Chemicals Stored." For MTBE Rail, TPC proposes to monitor compliance by tracking the "Number of Railcars."

As explained above with respect to 106.472, TPC's cursory language regarding monitoring for units authorized by unregistered claims of 106.476 fails to provide enough information to determine how 106.4 emission limits (including the prohibition on use of PBRs to authorize major modifications) apply to each unit or activity authorized by that PBR. And even if it were clear how the 106.4 limits applied to each unit or activity authorized by an unregistered claim of 106.476, the cursory statements provided in TPC's PBR Supplemental Table fail to explain how keeping records of chemicals stored in tanks or the number of railcars subject to 106.476 assures compliance with 106.4 limits or concentration and control requirements established by 106.476.

The PBR at 106.183, used without registration to authorize emissions from Lab Blr 1, and Lab Blr 2, applies to boilers, heaters, drying or curing ovens, furnaces, other combustion units so long as: 1) the only emissions are products of combustion of the fuel; 2) the maximum heat input is no higher than 40 million British thermal units per hour with the fuel being: sweet natural gas, liquid petroleum gas, fuel gas containing no more than 0.1 grain of total sulfur compounds per dry standard cubic foot, or a combination of these fuels; 3) unblended distillate fuel oil may be fired as a backup fuel only, limited to 720 hours per year, and containing less than 0.3% sulfur by weight; 4) all gas fired heaters and boilers with a heat input greater than 10 million Btu per hour (HHV) shall be designed such that the emissions of nitrogen oxides shall not exceed 0.1 pounds per million Btu heat input; and 5) records of hours of fuel oil firing and fuel oil purchases shall be maintained on-site on a two-year rolling retention period and made available upon request to the commission or any local air pollution control agency having jurisdiction.

TPC's PBR Supplemental Table indicates that "Maximum Firing Rate" shall be used to determine compliance with applicable 106.4 emission limits and 106.183 requirements. This method is not sufficient. For example, maximum firing rate alone is not sufficient to assure

compliance with 106.4 emission limits (including maintenance of emissions below levels that trigger major NNSR preconstruction permitting requirements). To determine how much pollution the boilers emit, TPC must also determine how much pollution they emit per unit of heat input. Nor does monitoring the boilers' maximum firing rate enable TPC to track how the firing of various fuels authorized by the PBR affect emissions rates for compliance purposes. The Draft Permit also fails to explain whether the 0.1 pounds/MMBtu NOx limit is applicable (i.e., whether the boilers have the capacity to fire more than 10 MMBtu/hour) or how compliance with that limit, if applicable, will be determined. Nor does not explain how compliance with the sulfur limit for fuel oil will be determined.

The TCEQ's PBR at 106.263 may be used to authorize routine maintenance, startup and shutdown of facilities and the construction and operation of temporary maintenance facilities consistent with requirements listed at 106.263 and emission limits at 106.4. Temporary maintenance facilities that may be authorized by this PBR are limited to: facilities used for abrasive blasting, surface preparation, and surface coating on immovable fixed structures; facilities used for testing and repair of engines and turbines; compressors, pumps, or engines and associated pipes, valves, flanges, and connections; flares, vapor combustors, catalytic oxidizers, thermal oxidizers, carbon adsorption units, and other control devices used to control vent gases released during the degassing of immovable, fixed process vessels, storage vessels, and associated piping; temporary piping required to bypass a unit or pipeline section undergoing maintenance; and liquid or gas-fired vaporizers used for the purpose of vaporizing inert gas. 30 Tex. Admin. Code § 106.263(c)(3). Activities that may be authorized under 106.263 include: routine maintenance activities which are those that are planned and predictable and ensure the continuous normal operation of a facility or control device or return a facility or control device to normal operating

conditions; and routine start-ups and shutdowns which are those that are planned and predictable. *Id.* at § 106.263(c)(1), (2).

TPC has claimed this PBR without registration to authorize emissions from ten different units or activities with the following proposed monitoring methods:

UNIT ID No.	Monitoring Requirement
Des Vac	Duration of Activity
2C CarbRem	Number of Cleanings
Tank 54	Number of Decants
T-84	Number of Cleanings
OIL-SEP	Number of Cleanings
DMFWashTow	Number of Cleanings
45 A Maint	Number of Cleanings
45 B Maint	Number of Cleanings
FUG-REGV	Number of Gasket Replacements
T-46	Number of Cleanings

This PBR is lengthy and establishes various restrictions and requirements, including the requirement to limit 24-hour emission totals below reportable quantities defined in 30 Tex. Admin. Code § 101.1. Because the above-listed authorizations are *unregistered* and because the permit record fails to include any information about which requirements apply to each unit/activity authorized the PBR, it is impossible to know how applicable PBR requirements apply to any of these units/activities, which requirements in the PBR are applicable, and which pollutants and in what quantities each unit or activity may emit. Indeed, in some cases it's not clear from the permit record what each unit or activity authorized by the PBR even is. Each of the proposed monitoring

methods involves counting the number of maintenance activities (cleanings or replacements) or the duration of the activity. But the permit record cannot establish that such monitoring is sufficient, because—as mentioned above—it’s not clear from the face of the permit which limits, restrictions, and requirements even apply to each authorized activity/unit, and because the permit record does not provide any information about how much pollution will be emitted during maintenance activities authorized by unregistered claims of 106.263.

TPC has claimed without registering the PBR at 106.373 to authorize emissions from two units at the Houston Plant. This PBR applies to refrigeration systems, including storage tanks used in refrigeration systems, so long as the system uses a refrigerant consistent with the rule. TPC proposes to “Maintain Record of Cooling Media” as the monitoring method to assure compliance with 106.4 emission limits for the units authorized by this unregistered PBR. While this method of monitoring may ensure compliance with the restriction on refrigerants established by 106.373, it is unclear how this information will be used to determine compliance with 106.4 emission limits.

TPC has claimed without registering the PBR at 106.371 to authorize emissions from two units at the Houston Plant. This PBR applies to cooling towers, water treating systems for process cooling water or boiler feedwater, and water tanks, reservoirs, or other water containers designed to cool, store, or otherwise handle water that has not been used in direct contact with gaseous or liquid process streams containing carbon compounds, sulfur compounds, halogens or halogen compounds, cyanide compounds, inorganic acids, or acid gases. TPC proposes to use “Cooling Tower Circulation Rate” to monitor compliance with applicable PBR requirements, including emission limits at 106.4 and operating constraints established by 106.371. But this monitoring method does not explain how TPC will determine emissions from its PBR cooling towers or which

contaminants these cooling towers emit. It's also unclear how cooling tower circulation rate is sufficient to ensure compliance with the operating restrictions established by 106.371.

The Executive Director must revise the Draft Permit to specify monitoring, testing, and recordkeeping requirements for each unregistered PBR that are sufficient to assure compliance with applicable PBR emission limits and operating requirements. 42 U.S.C. § 7661c(a), (c). Additionally, members of the public must have an opportunity to evaluate the sufficiency of these compliance methods. *Id.* at § 7661a(b)(6). Accordingly, the Executive Director must re-notice the Draft Permit after it is revised to provide members of the public an opportunity to evaluate and comment on the revisions.

B. The Draft Permit Fails to Include Monitoring that Assure Compliance with Applicable Requirements for TPC's Vinyl Acetylene Unit Chiller project, PBR Registration No. 161519.

1. The Vinyl Acetylene Unit chiller project is not eligible for authorization by PBR.

EPA's regulations for state permitting programs implementing the federal Clean Air Act, like Texas's PBR program, "[r]equire the State or local agency to provide opportunity for public comment on information submitted by owners and operators[,]” including “the agency's analysis of the effect of construction or modification on ambient air quality[,]” and “the agency's proposed approval or disapproval.” 40 C.F.R § 51.161(a). While this regulation appears to require public notice and comment opportunities each time an operator seeks authorization to construct a new source or to modify an existing source, Texas's PBR program purports to establish a streamlined process that complies with this requirement while, at the same time, allowing operators to construct certain kinds of sources or modifications that are not subject to public notice or comment procedures when they are authorized.

PBRs are generic authorizations for certain kinds of insignificant projects, which the TCEQ promulgated—subject to public notice and comment procedures. 30 Tex. Admin. Code §§ 106.1, 106.2. Since these authorizations are generic and because the TCEQ’s determination that projects complying with the generic terms will not significantly affect air quality is subject to public participation procedures at the time each PBR is promulgated, TCEQ allows operators to claim PBRs to authorize construction and modifications without providing for additional public participation. EPA has approved this process as consistent with 40 C.F.R. § 51.161. 68 Fed. Reg. 64543, 64545 (November 14, 2003) (“[N]ew or revised PBR must undergo public notice and a 30-day comment period, and TCEQ must address all comments received from the public before finalizing its action to issue or revise a PBR” and “[t]his meets the requirements of 40 C.F.R. 51.161[.]”).

But the TCEQ’s implementation of its PBR program rules for facilities at TPC’s Houston Plant is inconsistent with federal public participation requirements and exceeds the scope of EPA’s approval of the program. This is so because TPC has been allowed to mash-up different rules from different PBR categories to authorize complex projects involving significant emission units at an existing major source. Projects aggregating different PBRs in this way are not limited to the types of facilities and changes “the commission has determined will not make a significant contribution of air contaminants to the atmosphere[.]” 30 Tex. Admin. Code § 106.1. Because the public has not had the opportunity to comment on these kinds of complicated projects when any of the various PBRs they involve were promulgated, authorization of such projects without public notice and comment procedures conflicts with EPA’s regulation at 40 C.F.R. § 51.161 and exceeds the scope of EPA’s approval of the PBR program.

Specifically, the Draft Permit incorporates PBR Registration No. 161519, which authorizes “the Vinyl Acetylene Unit (VAU) chiller project.” This project combines three different PBR authorizations—106.261 and 106.261 from Subchapter K (General) and 106.371 from Subchapter P (Plant Operations) of TCEQ’s PBR regulations—to authorize increased emissions from various significant units at the Houston Plant as part of an effort to increase butadiene production at the plant. Technical Review Document, Permit No. 161519, Project No. 316448.⁵ These different PBRs were claimed as part of a single project to authorize installation of a new cooling tower, new fugitive components, increased emissions from Boilers 10 and 11 resulting from incremental increases in the amount of VAU off-gas sent to those boilers for combustion, and increased emissions resulting from incremental increases to steam demand from Boilers 9, 10, and 11. *Id.*

This kind of butadiene expansion project at an existing major source of pollution involving changes to equipment subject to major New Source Review preconstruction permit requirements has not been subject to review by the Commission as part of a PBR rulemaking (subject to notice and comment procedures) to determine whether it has the potential to make a significant contribution of air contaminants to the atmosphere. Accordingly, the VAU chiller project was not limited to “certain types of facilities or changes within facilities listed in ... [Chapter 106],” 30 Tex. Admin Code § 106.2, “which the commission has determined will not make a significant contribution of air contaminants to the atmosphere[.]” *Id.* at § 106.1. Thus, it was improper for the Executive Director to allow TPC to authorize the VAU chiller project by PBR. Because the VAU chiller project involved the construction of new facilities as well as modifications to existing facilities, and because the project does not “satisfy the conditions for facilities permitted by rule

⁵ This Technical Review Document is available electronically at: https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=5231466&Rendition=Web

under Chapter 106[,]” the Texas State Implementation Plan requires TPC to obtain a different kind of authorization for this project. 30 Tex. Admin. Code § 116.110(a); 40 C.F.R. § 52.2270(c) (incorporating § 116.110 into the Texas State Implementation Plan).

The Draft Permit’s failure to establish a schedule for TPC to comply with the Texas State Implementation Plan by obtaining a proper authorization for the VAU chiller project renders the Draft Permit deficient. 42 U.S.C. § 7661c(a) (“Each permit issued under this subchapter shall include enforceable emission limitations and standards, a schedule of compliance ... and such other conditions are necessary to assure compliance with applicable requirements of this chapter, including the requirements of the applicable implementation plan.”).

2. *The Draft Permit fails to establish monitoring, testing, and recordkeeping requirements that assure compliance with applicable requirements for the VAU chiller project.*

Each Title V permit must accurately describe how applicable requirements apply to emission units at the permitted source and include monitoring, testing, and recordkeeping provisions that are sufficient to assure compliance with applicable requirements. 42 U.S.C. § 7661c(a), (c). The Draft Permit fails this test with respect to applicable requirements for the VAU chiller project.

While the Technical Review Document and application for PBR Registration No. 161519, Project No. 316448 indicate that the project includes construction and operation of a rental cooling tower (EPN F-CT-TEMP), the Draft Permit’s New Source Authorization References by Emission Unit table does not include this cooling tower or identify any cooling tower as being subject to the requirements of PBR Registration No. 161519. Accordingly, the Draft Permit is incomplete and does not assure TPC’s cooling tower will comply with applicable requirements associated with PBR Registration No. 161519. 42 U.S.C. § 7661c(a). To resolve this deficiency, the Executive

Director must revise the Draft Permit to identify the rental cooling tower as a facility subject to PBR Registration No. 161519 requirements.

Additionally, the application and Technical Review Document for this project appear to underrepresent project emissions increases for TPC's boilers. According to TPC's application, the incremental increase in VOC emissions from Boilers 10 and 11 resulting from the additional firing of VAU off-gas is 1.08 tons per year. TPC VAU Chiller Project Application at PDF Page 57/62.⁶ TPC represents an additional VOC emissions increase of 3.29 tons per year from Boilers 9, 10, and 11 due to increased steam demand resulting from the project. *Id.* at 58/62. However, the application's representation that VOC emissions increases for this project are below the applicable netting threshold of 5 tons per year fails to include the 1.08 ton per year increase from increased firing of VAU-off gas and represents total VOC project increases from TPC's boilers as 3.29 tons per year. *Id.* at 56/62. When the additional 1.08 tons per year of VOC is added to the other project increases (3.29 tons per year for increased steam demand, 0.01 tons per year from new fugitive components, and 0.83 tons per year from the new cooling tower), increased VOC emissions resulting from the project total 5.3 tons per year, exceeding the applicable Nonattainment New Source Review netting threshold of 5 tons per year. 30 Tex. Admin. Code § 116.150(c)(1). Accordingly, TPC must conduct netting to determine whether net contemporaneous VOC emissions increases at the Houston Plant trigger major Nonattainment New Source Review preconstruction permitting requirements. *Id.*; 40 C.F.R. § 52.2270(c) (incorporating § 116.150 into the Texas State Implementation Plan). TPC's failure to conduct such a netting demonstration is a

⁶ Available electronically at:

https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=5759074&Rendition=Web

violation of this State Implementation Plan requirement and the Draft Permit must include a schedule for TPC to comply with it. 42 U.S.C. § 7661c(a).

The Draft Permit is also deficient because it fails to include monitoring, testing, and recordkeeping requirements that are sufficient to assure compliance with enforceable representations regarding project NO_x and VOC increases for the VAU chiller project. *Id.* at § 7661c(a), (c). According to TPC's application and the Executive Director's Technical Review document for the VAU chiller project indicate that VOC increases for TPC's boilers are limited to 3.29 tons per year of VOC and 3.27 tons per year of NO_x, even though the application's more detailed calculations indicate that additional VOC increases are likely to occur due to increased steam demand from Boilers 9, 10, and 11. Additionally, NO_x increases related to the project were calculated for Boiler 11 using the emission enforceable emission rate of 0.02 lb/MMBtu established for that boiler by Permit No. 46426, even though the TCEQ was aware at the time the VAU chiller project was authorized that Boiler 11 had failed to comply with that requirement on multiple occasions. *See* Agreed Order, Docket No. 2018-0957-AIR-E (imposing penalties for TPC's failure to comply with Permit No. 46426 limits on NO_x emissions from Boiler 11); *see also* Agreed Order, Docket No. 2020-1214-AIR-E (imposing penalties for failing to report failure to report NO_x violations involving Boiler 11). The PBR Supplemental Table indicates that compliance with these limits will be determined by "Monitor[ing] boiler emissions," but fails to explain *how* emissions will be monitored. This failure is especially glaring in light of TPC's inconsistent representations regarding VOC project increases and its repeated failure to comply with the NO_x control requirement for Boiler 11 used to calculate NO_x project increases.

VOC increases for this project were calculated presuming that boilers used to control VAU off-gas will continuously achieve a destruction efficiency of 99.9%, VAU Chiller Application at

59/62, but the Draft Permit—including the incorporated PBR Summary Table—do not contain monitoring requirements to determine compliance with this enforceable PBR registration representation. 30 Tex. Admin. Code § 106.6(b) (“All representations with regard to construction plans, operating procedures, and maximum emission rates in any certified registration ... become conditions upon which the facility permitted by rule shall be constructed and operated.”).

TPC’s application states that while its marine loading docks are impacted by the VAU chiller project “due to an actual increase in butadiene production[,] [t]here will not be any increase in actual emission from pressurized butadiene loading as the vapors from butadiene loading are routed back to the process.” VAU Chiller Application at 37/62. The Draft Permit, however, fails to identify any monitoring, testing, or recordkeeping requirements associated with this project to assure that all butadiene loading losses associated with the project are actually captured and directed back to process equipment.

The Draft Permit is deficient because it fails to include monitoring, testing, and recordkeeping methods that assure compliance with applicable emission limits and application representations for PBR Registration No. 161519. 42 U.S.C. § 7661c(a), (c). The Executive Director must revise the Draft Permit to include such terms and conditions. Additionally, members of the public must have an opportunity to evaluate the sufficiency of these compliance methods. *Id.* at § 7661a(b)(6). Accordingly, the Executive Director must re-notice the Draft Permit after it is revised to provide members of the public an opportunity to evaluate and comment on the revisions.

C. The Draft Permit improperly incorporates a confidential permit term.

The Draft Permit, Special Condition No. 28 provides that TPC must comply with the requirements of preconstruction permits listed in the Draft Permit’s New Source Review

Authorization References attachment and that such requirements are incorporated by reference into the Draft Permit as applicable requirements. The Draft Permit's New Source Review Authorization References attachment incorporates Permit No. 46307 by reference. Draft Permit at 236. Permit No. 46307 contains Special Condition No. 7, which states: "Total production throughput of polyisobutylene (PIB) shall be limited to the production rates provided in the Confidential Section of the permit amendment application, PI-1 dated May 31, 2017."⁷

This confidential operating limit is improper because confidential permit terms are expressly prohibited by Title V, 42 U.S.C. § 7661b(e) ("The contents of a [Title V] permit shall not be entitled to protection [as confidential information][.]"), and because the Draft Permit's incorporation of confidential permit terms fails to assure compliance with those terms. *Id.* at § 7661c(a) (requiring permits to identify applicable requirements and to establish conditions necessary to assure compliance with applicable requirements). To address this deficiency, the Executive Director must revise the Draft Permit to make the confidential PIB throughput limit public.

D. The Draft Permit fails to provide sufficiently detailed New Source Performance Standard ("NSPS") applicability determinations for Boiler 11.

Texas's federally-approved Title V regulation at 30 Tex. Admin. Code § 122.142(b)(2)(B) requires each Title V permit to include

the specific regulatory citations in each applicable requirement ... identifying the emission limitations and standards; and ... the monitoring, recordkeeping, reporting, and testing requirements associated with the emission limitations and standards ... sufficient to ensure compliance with the permit.

⁷ Commenters do not challenge the Draft Permit's incorporation of changes to Permit No. 46307 approved by the TCEQ on June 13, 2022. This objection to the Draft Permit addresses language in Permit No. 46307 established prior to the June 13, 2022, which has already been incorporated into Title V Permit No. O1598.

Similarly, EPA’s regulation at 40 C.F.R. § 70.6(a)(1) requires that “[e]ach permit issued under this part shall include ... [e]missions limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance.”

The Draft Permit’s incorporation of NSPS, Subpart Db requirements for BOILER11 falls short of these requirements, because the Draft Permit fails to identify the specific applicable Subpart Db requirements for controlling particulate matter (including opacity) and sulfur dioxide emissions from BOILER11. Draft Permit at 105 (indicating that Subpart Db requirements for particulate matter and sulfur dioxide apply to BOILER11, but failing to provide detailed citations for the specific applicable requirements). The Executive Director must revise the Draft Permit to include these detailed citations.

III. CONCLUSION

The Draft Permit’s failure to clearly state and make pollution control requirements established to protect public health practically enforceable falls short of what the Clean Air Act requires and deprives communities surrounding the plant of protections promised by federal law. This comes on top of TPC’s history of noncompliance and industrial disasters. The TCEQ must do more to protect Texans. In this case, the TCEQ must at least revise the Draft Permit to clearly identify and assure compliance with applicable pollution control requirements.

Sincerely,

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