Filed via email (titlevpetitions@epa.gov)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY BEFORE THE ADMINISTRATOR

IN THE MATTER OF \$ PETITION FOR OBJECTION

Clean Air Act Title V Permit No. O1598 \$

Issued to TPC Group LLC \$ Permit No. O1598

Issued by the Texas Commission on \$
Environmental Quality \$

PETITION TO OBJECT TO TITLE V PERMIT NO. 01598 ISSUED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Pursuant to section 42 U.S.C. § 7661d(b)(2), Air Alliance Houston hereby petitions the Administrator of the U.S. Environmental Protection Agency ("Administrator" or "EPA") to object to Federal Operating Permit No. O1598 issued by the Texas Commission on Environmental Quality ("TCEQ" or "Commission") authorizing operation of TPC Group LLC's ("TPC") Houston Plant, located in Harris County, Texas.

I. PETITIONER

Air Alliance Houston is a Texas 501(c)(3) non-profit advocacy organization working to reduce public health impacts from air pollution and to advance Environmental Justice through applied research, education, and advocacy. Air Alliance Houston takes a strong stance against disproportionate exposure to air pollution by emphasizing an agenda centered on equity and Environmental Justice.

II. PROCEDURAL BACKGROUND

This Petition addresses Proposed Title V Renewal Permit No. O1598 ("Proposed Permit").

Air Alliance Houston submitted written comments on Draft Renewal Permit No. O1598 ("Draft

Permit") on November 27, 2023 ("AAH Comments") before the public comment period closed on April 11, 2024.

The TCEQ issued its response to public comments concerning the renewal of Permit No. O1598 on November 1, 2024 ("Response to Comments") and submitted the Proposed Permit and Response to Comments for EPA to review on November 4, 2024. EPA's 45-day review period for the Proposed Permit ended on December 20, 2024 and EPA did not object to the Proposed Permit. Accordingly, members of the public have until February 17, 2025, 90 days after the close of EPA's review period, to petition EPA to object to the Proposed Permit. This Petition is submitted via email on February 17, 2025.

III. LEGAL REQUIREMENTS

Title V permits are the primary method for enforcing and assuring compliance with the Clean Air Act's pollution control requirements for major sources of air pollution. Operating Permit Program, 57 Fed. Reg. 32,250, 32,258 (July 21, 1992). Prior to enactment of the Title V permitting program, regulators, operators, and members of the public had difficulty determining which requirements applied to each major source and whether sources were complying with applicable requirements. This was a problem because applicable requirements for each major source were spread across many different rules and orders, some of which did not make it clear how general requirements applied to specific sources.

The Title V permitting program was created to improve compliance with and to facilitate enforcement of Clean Air Act requirements by requiring each major source to obtain an operating permit that (1) lists all applicable federally-enforceable requirements, (2) contains enough information for readers to determine how applicable requirements apply to units at the permitted source, and (3) establishes monitoring requirements that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a) and (c); Virginia v. Browner, 80

F.3d 869, 873 (4th Cir. 1996) ("The permit is crucial to implementation of the Act: it contains, in a single, comprehensive set of documents, all CAA requirements relevant to the particular source."); Sierra Club v. EPA, 536 F.3d 673, 674-75 (D.C. Cir. 2008) ("But Title V did more than require the compilation in a single document of existing applicable emission limits It also mandated that each permit . . . shall set forth monitoring requirements to assure compliance with the permit terms and conditions").

The Title V permitting program provides a process for stakeholders to resolve disputes about which requirements should apply to each major source of air pollution outside of the enforcement context. 57 Fed. Reg. 32,266 ("Under the [Title V] permit system, these disputes will no longer arise because any differences among the State, EPA, the permittee, and interested members of the public as to which of the Act's requirements apply to the particular source will be resolved during the permit issuance and subsequent review process."). Accordingly, federal courts do not generally second-guess Title V permitting decisions made by state permitting agencies and will not enforce otherwise-applicable requirements that have been omitted from or displaced by conditions in a Title V permit. See 42 U.S.C. § 7607(b)(2). Because courts rely on Title V permits to determine which requirements may be enforced and which requirements may not be enforced against each major source, state permitting agencies and EPA must exercise care to ensure that each Title V permit includes a clear, complete, and accurate account of the requirements that apply to the permitted source.

The Act requires the Administrator to object to a state-issued Title V permit if he determines that it fails to include and assure compliance with all applicable requirements. 42 U.S.C. § 7661d(b)(1); 40 C.F.R. § 70.8(c). If the Administrator does not object to a Title V permit, "any person may petition the Administrator within 60 days after the expiration of the Administrator's

45-day review period to make such objection." 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d). The Administrator "shall issue an objection . . . if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of the . . . [Clean Air Act]." 42 U.S.C. § 7661d(b)(2); see also 40 C.F.R. § 70.8(c)(1). The Administrator must grant or deny a petition to object within 60 days of its filing. 42 U.S.C. § 7661d(b)(2).

IV. PERMIT DEFICIENCIES

A. The Proposed 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.

1. Specific Grounds for Objection, Including Citation to Permit Term

Proposed 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 Proposed 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, IF-963, 31F-2030, 4F-4473 6F-433, T-73, T-74, 1F-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).¹

Proposed Permit, Special Condition No. 29 requires TPC to "comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR."

Proposed Permit, Special Condition No. 30 provides that:

The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must include all applicable emission limitations and standards as well as monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(2), (3) and (c)(1); *In the Matter of Wheelabrator Baltimore* ("Wheelabrator Order"), Permit No. 24-510-01886 at 10 (April 14,

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¹ The Executive Director incorrectly takes issue with Petitioner's claim that T-73, T-74, FUG-REGV, and T-46 are authorized under "unregistered" PBRs, "since as noted in Table A of the OP-PBRSUP form dated July 22, 2022, they have been authorized under a registered PBR." Response to Comments at Response 2. These units are subject to requirements in both registered and unregistered PBRs. The registered PBRs are listed in Table A of the OP-PBRSUP form dated July 22, 2022 and the unregistered PBRs are listed in Table B. The Executive Director's confusion demonstrates one problem with the TCEQ's method of incorporating NSR requirements into Title V permits by reference. When you have multiple permits and multiple kinds of permits establishing and modifying requirements for a particular emission unit, and the controlling requirements aren't directly listed anywhere, it becomes very difficult—impossible even—to keep straight which authorizations apply to each unit, let alone which specific requirements apply under each authorization.

2010). Emission limits in NSR permits, including PBRs and standard exemptions, incorporated by reference into the Proposed Permit are applicable requirements. 40 C.F.R. § 70.2; Proposed Permit, Special Condition No. 28. The rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.5(a)(5); In the Matter of United States Steel, Granite City Works ("Granite City I Order"), Order on Petition No. V-2009-03 at 7-8 (January 31, 2011).

As explained below, the Proposed Permit is deficient because (1) it fails to provide enough information to establish how applicable PBR emission limits apply to units at the Houston Plant authorized by unregistered PBRs, see In the Matter of Motiva Enterprises Port Arthur Refinery, Order on Petition No. VI-2016-23 at 29 (May 31, 2018) ("Petitioners have demonstrated that the title V permit and permit record do not explain whether the emission limits under 30 TAC 106.4 apply cumulatively to a group of units authorized as one project, or to each individual unit.");² (2) it fails to specify monitoring, testing, and recordkeeping requirements that assure compliance with emission limits and operating requirements in incorporated unregistered PBRs; and (3) the permit record does not contain a reasoned justification for the Executive Director's determination that monitoring, testing, and recordkeeping requirements in the Proposed Permit assure compliance with emission limits established by TPC's unregistered PBRs.

3. Inadequacy of the Permit Term

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,

² Available electronically at: https://www.epa.gov/sites/production/files/2018-06/documents/motiva port arthur response 2018.pdf

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 Proposed 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 explain how compliance with applicable PBR requirements for unregistered PBRs will be determined. Accordingly, the Proposed 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 NOx 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 Proposed 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 Proposed 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.³ Nothing in the permit

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³ Indeed, VOC or NOx 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 NOx 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 NOx 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

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 Proposed 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 Proposed 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.

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 weigh, 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

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).

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 Proposed 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, as required by 30 Tex. Admin. Code § 122.142(b)(2)(B) (Title V permits must include "the specific regulatory citations in each applicable requirement ... identifying the emission limitations and standards[.]"). 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 as required by 42 U.S.C. § 7661c(a) and 30 Tex. Admin. Code § 122.142(b)(2)(B). 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.

EPA must object to the Proposed Permit because it fails 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 and because in many cases it is unclear how requirements and limits in claimed PBRs apply to units at the Houston Plant. 42 U.S.C. § 7661c(a), (c); 30 Tex. Admin. Code § 122.142(b)(2)(B).

4. Issues Raised in Public Comments

These issues were raised on pages 4-13 of the AAH Comments.

5. Analysis of State's Response

In her Response to Comments, the Executive Director does not contend that the monitoring provisions in TPC's PBR Supplemental Table, which were the focus of our public comments, are sufficient to assure compliance with all applicable PBR requirements. Instead, she argues that the Proposed Permit's special conditions incorporating PBR requirements, requiring compliance with applicable PBR regulations and requiring TPC to maintain records to demonstrate compliance with PBR requirements, as well as monitoring, testing, recordkeeping requirements in TPC's non-PBR NSR authorizations, and applicable requirements in EPA and Texas regulations that apply to units at the Houston Plant all work together to assure compliance with emission limits and standards in unregistered PBR authorizations claimed by TPC. Response to Comments at Response 2.

This response is deficient for four reasons. First, this response does not address Petitioner's demonstration that the Proposed Permit fails to explain how limits established by 30 Tex. Admin. Code § 106.4—including the prohibition on the use of PBRs to authorize major modifications—apply to equipment at the Houston Plant in cases where TPC has used a particular unregistered PBR to authorize emissions from multiple units. Second, this response fails to address Petitioner's demonstration that the Proposed Permit fails to provide detailed applicability determinations identifying which provisions in claimed but unregistered PBRs apply to units at the Houston Plant. Third, the Proposed Permit doesn't actually require TPC to use the applicable requirements in

Texas and EPA regulations and non-PBR NSR permits referenced by the Response to Comments to determine compliance with applicable PBR requirements. Finally, even if the Proposed Permit did require TPC to apply provisions in other applicable rules and permits to determine compliance with PBR requirements, the permit record for this Title V permit renewal fails to include a justification for the Executive Director's determination that such requirements are sufficient to assure compliance with applicable requirements in PBRs claimed but not registered for the Houston Plant.

The Executive Director begins her response by stating that Proposed Permit, Special Condition Nos. 28-30 help assure compliance with PBR requirements incorporated by reference into the Proposed Permit. Response to Comments at Response 2. As EPA has repeatedly held in objections to Texas Title V permits, the generic requirements established by Special Condition Nos. 29 and 30 are too vague to assure compliance with applicable requirements and deprive members of the public of their opportunity to evaluate and comment on the specific methods TPC will use to determine compliance with PBR requirements. *See, e.g. In the Matter of BP Amoco Chemical Company*, Order on Petition No. VI-2017-6 at 33-37 (July 20, 2021). Proposed Permit, Special Condition No. 28's incorporation of provisions in TPC's PBR Supplemental Table fails to remedy this defect, because—as explained above—the PBR Supplemental Table does not actually identify the monitoring methods and calculation procedures TPC will use determine compliance with applicable PBR requirements. Accordingly, as Petitioner has already explained, Proposed Permit, Special Condition Nos. 28-30 do not assure compliance with applicable PBR requirements, as 42 U.S.C. § 7661c(a), (c) mandates.

⁴ Available electronically at: https://www.epa.gov/system/files/documents/2021-07/bp-amoco-order 7-20-21.pdf

Next, the Executive Director points out that some emissions units authorized by unregistered PBRs at the Houston Plant are also subject to requirements in other NSR permits incorporated by reference into the Proposed Permit. Response to Comments at Response 2. According to the Executive Director, the Proposed Permit's Applicable Requirements Summary Table "include[s] extensive monitoring, reporting, recordkeeping and testing (MRRT) requirements that are sufficient to demonstrate compliance with applicable state and federal regulations such as 30 TAC Chapter 115, Storage of VOCs, 40 CFR Part 63, Subpart G, etc. and PBR requirements for VOC emissions." *Id.* But, the Applicable Requirements Summary Table does not include any language suggesting that TPC must apply monitoring requirements from applicable state and federal regulations, such as Texas's 30 TAC Chapter 115 regulations, to determine compliance with emission limits in TPC's unregistered PBR authorizations. Instead, the Proposed Permit's Special Condition Nos. 28-30 explain how TPC is to determine compliance with PBRs and other NSR requirements. These special conditions do not incorporate any of the monitoring, testing, and recordkeeping requirements in the Applicable Requirements Summary Table referenced by the Response to Comments as methods TPC must use to determine compliance with PBR limits. Accordingly, provisions included in the Proposed Permit's Applicable Requirements Summary Table but not listed in any document incorporated by Proposed Permit, Special Condition No. 28 do not help assure compliance with PBR limits.

The same is true of the Executive Director's next argument that monitoring, testing, and recordkeeping requirements in TPC's source-specific NSR permits covering some of the same units TPC has authorized using unregistered PBRs help assure compliance with PBR limits. Response to Comments at Response 2. TPC has used unregistered PBRs to modify requirements for certain tanks initially authorized by source-specific NSR permits, as 30 Tex. Admin. Code §

116.116(d) allows. Nothing in Proposed Permit, Special Condition Nos. 28-30 requires TPC to apply monitoring, testing, and recordkeeping requirements in its source-specific NSR permits to determine compliance with PBR requirements for units at the Houston Plant. Accordingly, monitoring, testing and recordkeeping requirements in TPC's source specific NSR permits do not remedy the deficiency demonstrated by Petitioner.

B. The Proposed Permit Fails to Assure Compliance with Applicable Requirements for TPC's Vinyl Acetylene Unit Chiller Project, PBR Registration No. 161519.

1. Specific Grounds for Objection, Including Citation to Permit Term

Proposed Permit, Special Condition No. 28 incorporates by reference PBR registrations referenced in the New Source Review Authorization References attachment. PBR Registration No. 161519, which authorized TPC's Vinyl Acetylene Unit Chiller project, is listed as an applicable requirement by this attachment. Proposed Permit at 241, 243-244.

2. Applicable Requirement or Part 70 Requirement Not Met

PBR Registration No. 161519 combines three different PBR authorizations—106.261, 106.262, and 106.371 to authorize increased emissions from various significant units at the Houston Plant. This project was improper because it 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.* 106.1.

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 Proposed Permit fails this test with respect to applicable requirements for PBR Registration No. 161519.

3. Inadequacy of the Permit Term

a. 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 and 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 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 Proposed 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. 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

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

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 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 Proposed 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 Proposed 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.").

b. The Proposed 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 Proposed 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 Proposed 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 Proposed 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 Proposed 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 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,

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

⁶ Available electronically at:

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

The Proposed 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 NOx 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 NOx, 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, NOx 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 NOx emissions from Boiler 11); *see also* Agreed Order, Docket No. 2020-1214-AIR-E (imposing penalties for failing to report failure to report NOx 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 NOx control requirement for Boiler 11 used to calculate NOx 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 Proposed 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 Proposed 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 Proposed 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 Proposed 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 Proposed Permit after it is revised to provide members of the public an opportunity to evaluate and comment on the revisions.

4. Issue Raised in Public Comments

These issues were raised on pages 13-19 of the AAH Comments.

5. Analysis of the State's Response

The Executive Director does not even attempt a substantive response to Petitioner's demonstration that the Vinyl Acetylene Unit chiller project was improperly authorized by PBR and that it triggered NNSR netting requirements. Petitioner demonstrated these defects by dissecting TPC's registration application and the Executive Director's Technical Analysis Summary. The Executive Director's Response to Comments simply points to these same documents—without explanation—as if their mere existence rebuts all potential deficiencies:

The ED respectfully notes that PBR registration number 161519 authorized the Vinyl Acetylene Unit (VAU) chiller project emission units under PBRs § 106.261, § 106.262, and § 106.371. For detailed emission source analysis and technical analysis summary on the project please refer to a copy of the PBR registration application that is accessible via CFR Online (WCC content ID 5371655) and a technical summary of the project ... that is accessible via CFR Online (WCC content ID 4544699). Specifically, page 32 of 62 of [the] PBR registration application ... provides [a] detailed description of the project, and [the] federal

applicability analysis is shown on pages 37 and 38 of 62. A PI-7-CERT form (see pages 6-27 of 62) [e]nsures federal[] enforceability for various emissions. The technical summary document..., page 2 of 2, also documents the federal applicability analysis which shows emission increases for various pollutants including CO, NOx, PM, PM10, PM2.5, VOC and SO2 were below the trigger limits.

Response to Comments at Response 3.

The Executive Director's Technical Analysis Summary, based on her review of TPC's application for PBR Registration No. 161519 does not rebut Petitioner's demonstration of deficiency (which relied on these same documents) because:

- The kind of project authorized by PBR Registration No. 161519 and described in the Executive Director's technical analysis summary and TPC's application for that registration is not eligible for authorization via PBR. AAH Comments at 13-16;
- The Proposed Permit fails to identify F-CT-TEMP—described in the technical analysis summary and application as an emission unit authorized by PBR Registration No. 161519 and subject to requirements in that registration. *Id.* at 16-17;
- The Executive Director's determination, reflected in the technical analysis summary, that the VAU Chiller project authorized by PBR Registration No. 161519 did not trigger netting requirements is based on an incorrect calculation of incremental increases in VOC emissions from Boilers 10 and 11. *Id.* at 17-18;
- Applicable requirements established by PBR Registration No. 161519 are not subject to monitoring, testing, and recordkeeping methods sufficient to assure compliance and fail to account for known noncompliance with existing limits for Boiler 11. *Id.* at 18-19.

The Executive Director also explained that:

As part of obtaining an NSR permit, TCEQ staff have conducted a thorough review of applicant's NSR permit application for 161519 permit to ensure it meets the requirements of all applicable state and federal standards.

Response to Comments at Response 3.

This response supports rather than rebuts Petitioner's demonstration that the VAU Chiller project is not eligible for authorization by PBR. PBRs are *generic* authorizations for certain kinds of projects—clearly defined by rule—that the TCEQ determines in advance do not have the potential to significantly affect air quality. It is only because PBRs are narrowly-defined in this way that EPA determined that the TCEQ's process of providing public notice and an opportunity to comment at the time a PBR is issued, rather than when it is claimed to authorize a specific project complies with 40 C.F.R. § 51.161(a) (requiring members of the public to have the opportunity to comment on information a permitting authority considers when deciding whether to grant or deny a permit application). 68 Fed. Reg. 64543, 64545 (November 14, 2003).

Here, the Executive Director admits that the TCEQ's review of information supporting promulgation of each of the three PBRs TPC claimed as part of PBR Registration No. 161519 was sufficient to ensure that the project covered by this registration complied with all applicable federal and state requirements. This is not surprising, since a project combining characteristics of three different PBRs is likely to be very different than projects falling entirely within the scope of a single PBR. Also, one expects special care to be taken for projects authorizing increases from significant emission units at an existing major source. But the Executive Director's reliance on its review of project specific information to approve this registration created a public participation problem. Members of the public did not have an opportunity to comment on all the information the TCEQ relied upon to approve this project at the time it issued the relevant PBRs, as 40 C.F.R. § 51.161(a) requires. AAH Comments at 13 (citing 40 C.F.R. § 51.161(a)). This problem is the result of the TCEQ's failure to implement its PBR program consistent with EPA's approval. Thus,

the TCEQ's approval of the VAU Chiller project by PBR registration was improper and exceeds the scope of the PBR program approved by EPA. AAH Comments at 13-16.

The Executive Director concludes her response by stating that monitoring methods for PBR Registration No. 161519 are identified in the PBR Supplemental Table referenced by Proposed Permit, Special Condition No. 28 and that "emission calculation methodologies used by the applicant in an NSR permit application must be consistent with the emission calculation methodologies used by the applicant to report emissions inventory data to TCEQ. Response to Comments at Response 3. Petitioner's comments already explained why the monitoring methods described by the PBR Supplemental Table are insufficient. The Executive Director's statement that TPC's PBR registration application calculations are necessarily consistent with the methodology TPC uses to calculate emissions reported to the Emissions Inventory is unsupported and irrelevant. The Executive Director fails to identify any provision in the Proposed Permit establishing such a requirement; she fails to explain how consistency between application calculation methods and emissions inventory reporting methods assures compliance with applicable PBR requirements, and she fails to establish that TPC must use the same methods it used to calculate its PBR registration limits to demonstrate compliance with those limits. Accordingly, the Executive Director failed to rebut Petitioner's demonstration that the Proposed Permit is deficient.

B. CONCLUSION

For the foregoing reasons, the Proposed Permit issued by the TCEQ for TPC's Houston Plant is deficient and fails to comply with the Clean Air Act's requirements. Accordingly, the Act requires the Administrator to object to the Proposed Permit.

DATED: February 17, 2025

Sincerely,

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