



October 30, 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. O1553, for ExxonMobil's Baytown Olefins Plant.

Dear Ms. Gharis,

Air Alliance Houston, Environmental Integrity Project, and Environment Texas ("Commenters") appreciate this opportunity to comment on and request a public meeting concerning draft renewal Permit No. O1553 ("Draft Permit") authorizing operation of ExxonMobil's Baytown Olefins Plant in Harris County, Texas.

I. Introduction and Request for a Public Meeting

ExxonMobil has repeatedly violated preconstruction permitting requirements with the Texas Commission on Environmental Quality ("TCEQ") and the Environmental Protection Agency's ("EPA") blessing.¹ This private noncompliance and governmental failure to regulate have resulted in significant increases in the amount of air pollution those who live and work near the plant are exposed to. It has contributed to Harris County's ongoing nonattainment with federal

¹ See e.g. *Sierra Club and Air Alliance Houston's Motion for Rehearing*, TCEQ Docket No. 2013-0657-AIR (challenging TCEQ's authorization of major modification with minor New Source Review Permit); *Environmental Integrity Project, Air Alliance Houston, and Sierra Club's Motion to Overturn the Executive Director's Reopening of Permit No. 3452/PAL6*, TCEQ Docket No. 2014-0965-AIR (challenging TCEQ's improper administrative increase of particulate matter PAL limit); *In the Matter of ExxonMobil Corporation, Baytown Olefins Plant*, Order on Petition No. VI-2016-12 (March 1, 2018) (invoking Hunter Policy to determine that TCEQ's failure to properly implement major New Source Review program requirements for ExxonMobil's Baytown Olefins Plant should not be subject to federal review as part of the Title V permitting process); *Consent Decree, United States v. Exxon Mobil Corporation*, Civil Action No. 4:17-cv-3302 (S.D. Tex June 6, 2018) (allowing ExxonMobil to use reductions mandated by enforcement action for thousands of tons of unauthorized VOC emissions to avoid triggering major New Source Review requirements at its Texas sources subject to PAL permit requirements).

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ozone standards, which not only endangers public health but also constitutes an economic burden on the area. While it may be too late to reverse past harm, we urge the TCEQ to revise the Draft Permit to address the deficiencies we identify below. These changes will at least make it more difficult for ExxonMobil to evade requirements imposed to protect public health in the future.

There are over 1,500 households within one mile of ExxonMobil's Baytown Olefins Plant and 67% of those living in this area are people of color. Nearly 40 percent (37%) of those living in this area are Spanish speaking and 40% are considered low income. This area is also home to three parks and Pumphrey Elementary School. People living in the surrounding zip codes, 77520 and 77521, are experiencing elevated levels of cancer, stroke, heart disease, asthma, chronic obstructive pulmonary disease compared to the Harris County average.

Air pollution from petrochemical plants, refineries, and terminals in the area—including ExxonMobil's Baytown Olefins Plant—contribute to these elevated negative health impacts that primarily harm people of color. Accordingly, Commenters urge the TCEQ to undertake an Environmental Justice review to ensure that renewal of the Draft Permit will not 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 ExxonMobil's Baytown Olefins Plant to ask questions of ExxonMobil and TCEQ representatives and to provide live, in-person comments on issues related to operation of the Baytown Olefins Plant, Commenters **request a public meeting regarding the Draft Permit.**

II. Draft Permit Deficiencies

Commenters reserve the right to supplement its treatment of deficiencies addressed in these comments and to identify new deficiencies should a public meeting be held regarding the Draft Permit. Some of the deficiencies we identify below require action beyond the revision of the Draft

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Permit. For example, ExxonMobil's failure to provide complete information about how it determines compliance with applicable requirements undermines the public's ability to fully participate in the permit renewal process. Accordingly, the Draft Permit must be re-noticed after ExxonMobil has supplemented its application to provide the missing information. Additionally, these comments demonstrate that ExxonMobil's Permit No. PAL6 must be revised to account for Harris County's redesignation as a severe ozone nonattainment area during the permit effective period. According to TCEQ's regulations, the PAL permit must be revised to account for this redesignation as part of the Title V renewal process. Finally, these comments demonstrate that ExxonMobil has failed to use a system that complies with TCEQ's federally-approved regulations for PAL permits. These regulations provide that failure to use monitoring system that meets applicable requirements renders a PAL permit invalid. Accordingly, Permit No. PAL6 is invalid and should be voided prior to renewal of the Draft Permit.

A. The Draft Permit fails to include information necessary to determine whether its monitoring methods are sufficient to assure compliance with applicable requirements.

Each Title V permit must include monitoring, compliance certification, and reporting requirements that assure ongoing compliance with applicable requirements. 42 U.S.C. § 7661c(a), (c). Where a permit allows an operator to use emission factors to demonstrate compliance with applicable requirements, Title V permits must identify the specific emission factors that will be used to demonstrate compliance and the permitting record must explain the permitting authority's basis for determining that the relevant emission factors are sufficient to assure compliance. *In the Matter of United States Steel, Granite City Works*, Order on Petition No. V-2011-2 at 9-12 (December 3, 2012) (granting petition, because permit failed to specify which emission factors operator was required to use to demonstrate compliance with applicable requirements); *In the Matter of United States Steel, Granite City Works*, Order on Petition No. V-2009-03 at 13-14

(January 31, 2011) (granting petition because permitting authority “failed to provide an explanation why use of the emission factors is adequate to assure compliance.”).

The Draft Permit fails to provide this information for emission units covered by Permit No. PAL6. Most glaringly, it is unclear from the Draft Permit whether *any* monitoring requirements currently apply for purposes of determining compliance with the limits in Permit No. PAL6. The Draft Permit incorporates the versions of Permit Nos. 3452 and PAL6 issued on August 25, 2022. Draft Permit at 507. The version of these two permits incorporated by reference into the Draft Permit are included in the same document, which constitutes a single permit. This document includes Special Condition No. 28, which explains how emissions from units at the Baytown Olefins Plant should be calculated to determine compliance with limits in Permit No. PAL6. This same special condition, however, states that it shall no longer apply upon issuance of a standalone PAL6 permit. Permit No. PAL6 was issued as a standalone permit when it was renewed on December 23, 2022. This standalone permit, however, is not incorporated into the Draft Permit. Accordingly, since the current stand-alone PAL permit is not incorporated into the Draft Permit and because the PAL compliance monitoring methods in the outdated Flex/PAL permit incorporated into the Draft Permit became void upon issuance of the standalone PAL permit, the Draft Permit fails altogether to specify any monitoring, testing, and recordkeeping requirements that assure compliance with Permit No. PAL6 emission limits. This renders the Draft Permit deficient and deprived members of the public of their opportunity to review and assess the sufficiency of the methods ExxonMobil is using to determine compliance with Permit No. PAL6. 42 U.S.C. § 7661c(a), (c).

Putting aside this problem, the monitoring conditions in the version of Permit No. PAL6/3452 incorporated by reference into the Draft Permit also fail to provide sufficient detail

about how compliance with PAL6 emission limits should be determined. For example, Special Condition Nos. 27 and 28 of this permit direct ExxonMobil to determine emissions from combustion sources “using CEMS data” to determine compliance with PAL6 emission limits. But ExxonMobil does not use CEMS data to monitor direct emissions of SO₂, PM (or PM₁₀ and PM_{2.5}), CO, or H₂SO₄ from combustion units at the Baytown Olefins Plant. Presumably, ExxonMobil uses CEMS data to determine the firing rate for each piece of equipment over the relevant averaging period and then uses an emission factor to calculate emissions based on the monitored firing rate. This is the method called for by the standalone version of Permit No. PAL6 that is not incorporated by reference into the Draft Permit. *See* Permit No. PAL6 (12/23/22), Special Condition No. 6.² But the Draft Permit does not straightforwardly require emissions to be determined in this way, and, even if it did, the Draft Permit fails to identify or explain the sufficiency of any particular emission factors (including stack test emission factors) that ExxonMobil has used in the past or may use in the future to determine compliance with Permit No. PAL6. This failure renders the Draft Permit deficient and has deprived members of the public of their opportunity to review and evaluate the sufficiency of ExxonMobil’s compliance determination process for Permit No. PAL6. *See e.g., In the Matter of Valero Refining-Texas, L.P., Valero Houston Refinery*, Order on Petition No. VI-2021-8 at 35 (June 30, 2022) (“The Permit neither identifies the emission factor nor the equations that are to be used to demonstrate compliance with the Permit limits. While TCEQ does identify the monitoring that is being used in its RTC, that does not satisfy the requirement for the Permit itself (not merely a mention in the

² Permit No. PAL6 (12/23/2022) Special Conditions are available electronically at: https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=7068620&Rendition=Web

record) to ‘set forth’ monitoring requirements to assure compliance with permit terms and conditions.”) (internal citation omitted).

The consequences of this deficiency are easy to illustrate. If we presume that ExxonMobil must comply with monitoring requirements in its current, standalone PAL6 permit, ExxonMobil may multiply heat input over the relevant averaging period by “1) representative stack test emission factors, 2) vendor guarantee, or 3) applicable AP-42 emission factors” to determine VOC, PM, PM10, and PM2.5 emissions from boilers, furnaces, heaters, turbines, and steam generators during normal operation, [and] maintenance, startup, and shutdown[.]” *Id.* However, these different measures render very different results. Accordingly, ExxonMobil should not be given carte blanche to decide which method to use in any particular case.

For example, Permit No. PAL6 covers furnaces authorized by Permit No. 102982. Emission limits for particulate matter emissions from these furnaces included in Permit No. 102982 and the contribution of these units for purposes of calculating the contribution of these units to the particulate matter emission limit in Permit No. PAL6 is based on an AP-42 emission factor of 7.6 lb/10⁶ scf for natural gas combustion, which converts to approximately 0.00745 lb/MMBtu. ExxonMobil has conducted particulate matter stack testing four of the furnaces authorized by Permit No. 102982, obtaining the results (converted to lbs/MMBtu) listed in Table 1 below.³ These results indicate emissions much lower than predicted by the AP-42 emission factor. While the standalone version of Permit No. PAL6 authorizes ExxonMobil to also use

³ These stack test reports may be accessed electronically:

https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=4766182&Rendition=Web (XXAF01-ST),

https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=4770911&Rendition=Web (XXBF01-ST),

https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=4240153&Rendition=Web (XXDF01-ST),

https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=4961929&Rendition=Web (XXHF01-ST).

emission factors based on its vendor guarantees, ExxonMobil has not made the terms of such guarantees public.⁴

Table 1

Furnace EPN	Run 1 (lb/MMBtu)	Run 2 (lb/MMBtu)	Run 3 (lb/MMBtu)	Run 4 (lb/MMBtu)	Avg. (lb/MMBtu)
XXAF01-ST	0.00012	0.000056	0.000098	0.00012	0.0000985
XXBF01-ST	0.00014	0.000098	0.00014	0.00012	0.0001245
XXDF01-ST	0.000126	0.000126	0.000098	0.000154	0.000126
XXHF01-ST	0.00007	0.000098	0.000098	0.00012	0.0000965

The significant difference between stack test emission rates and AP-42 emission rates dictate that ExxonMobil should not have discretion to choose between them to determine compliance with PM limits in Permit No. PAL6. For example, if ExxonMobil's furnace XXAF01-ST operated at 415 MMBtu/hr for 6,000 hours in a twelve-month period, an emission factor based on its average performance during its four stack tests run predicts annual PM emissions of approximately 1 tenth of one ton.⁵ The same calculation using the applicable AP-42 emission factor predicts annual PM emissions of more than 9 tons, approximately 90 times greater than emissions predicted using stack test results.⁶

While ExxonMobil likely prefers calculating compliance using stack test emission factors, these emission factors were not used to calculate any of the limits in any of ExxonMobil's permits and it is far from clear whether these emission factors accurately reflect particulate matter emission rates for equipment across all operating scenarios authorized by preconstruction permits incorporated by reference into the Draft Permit. For example, Permit Nos. 3452 provides that furnaces, turbines, duct burners, and boilers may fire natural gas, refinery fuel gas, syngas plant

⁴ ExxonMobil treats this information as Confidential Business Information. However, vendor guarantees that are incorporated by reference into a Title V permit as a method for assuring compliance with applicable requirements is not eligible for protection as CBI as a matter of law. 42 U.S.C. § 7661b(e).

⁵ $((415 \times 6,000) \times 0.0000985) / 2000 = 0.123$ tons.

⁶ $((415 \times 6,000) \times 0.00745) / 2000 = 9.275$ tons.

purge gas, plant tail gas, or any combination of these gases. Permit No. 3452, Special Condition No. 8.⁷ While Permit No. 102982 does not specifically identify the kind of gasses that may be fired by combustion units covered by that permit, nothing in the permit prohibits the use of fuels other than natural gas. Particulate matter emissions resulting from the firing of refinery fuel gas, syngas plant purge gas, and plant tail gas are often significantly higher than emissions resulting from the firing of pure pipeline quality natural gas. Thus, ExxonMobil must provide additional information about how it determines particulate matter emissions from equipment at the Baytown Olefins Plant across various operating scenarios authorized by permits incorporated by reference into the Draft Permit. ExxonMobil's failure to provide this information renders the Draft Permit incomplete and has deprived members of the public of their opportunity to evaluate the sufficiency of monitoring requirements provided for by the Draft Permit.

These same problems exist for other combustion units at the Baytown Olefins Plant, as well as VOC, SO₂, CO, and H₂SO₄ emissions from combustion units that are not monitored by CEMs. ExxonMobil must update its application to identify the emission factors it applies to demonstrate compliance with emission limits in Permit No. PAL6 and demonstrate that these emission factors, along with the calculation methodologies these emission factors are plugged into, accurately determine all emissions in terms of mass per unit of time across all authorized operating scenarios, 30 Tex. Admin. Code § 116.186(c)(2), and assure ongoing compliance with applicable requirements. 42 U.S.C. § 7661c(a), (c).

⁷ Available electronically at:

https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=6880318&Rendition=Web

B. The Draft Permit is Deficient because NO_x and VOC limits in Permit No. PAL6 have not been adjusted downward to account for Harris County’s Redesignation as a Severe Ozone Nonattainment area.

The Draft Permit incorporates Permit No. PAL6, which establishes plantwide limits on the amount of NO_x and VOC ExxonMobil may emit from its Baytown Olefins Plant. The NO_x limit of 2,448.71 tons per year and the VOC limit of 435.03 tons per year include a significance factor of 40 tons per year for these pollutants based on Harris County’s designation as a moderate ozone nonattainment area at the time PAL6 was issued. Letter from Adam Cantu, ExxonMobil Environmental Supervisor to John Barrientez, TCEQ Chemical Section, New Source Review Program dated May 9, 2005;⁸ 30 Tex. Admin. Code § 116.12, Table 1 (indicating that significance threshold for NO_x and VOC emissions increases in moderate ozone nonattainment areas is 40 tons per year).

Harris County has been redesignated as a severe ozone nonattainment area. *Determinations of Attainment by the Attainment Date*, 87 Fed. Reg. 60926, 60938 (October 7, 2022). The applicable NO_x and VOC significance factor for PALs for sources located in severe ozone nonattainment areas is 25 tons per year. *Id.* at § 116.188(1) (“An amount to the applicable significant level for the PAL pollutant may be added to the baseline actual emissions when establishing the PAL.”); *Id.* At § 116.12, Table 1 (indicating that the significance threshold for NO_x and VOC emissions increases in severe ozone nonattainment areas is 25 tons per year). This change in the applicable significance factor for determining whether projects at the Baytown Olefins Plant trigger Nonattainment New Source Review requirements, which became effective

⁸ Available electronically at: https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=1327755&Rendition=Web The letter begins on PDF page 191 of 282. Application tables indicating that a 40 ton per year significance threshold was applied to establish the NO_x and VOC limits in PAL6 may be found at PDF pages 221-223 of 282.

during the PAL effective period, must be accounted for in the Draft Permit. *Id.* at § 116.196(g) (“If the compliance date for a state or federal requirement that applies to the PAL source occurs during the PAL effective period, and if the executive director has not already adjusted for such requirement, the PAL shall be adjusted at the time of the PAL permit renewal *or federal operating permit renewal*, whichever occurs first.”) (emphasis added). The NO_x and VOC limits in Permit No. PAL6 have not been adjusted downward to reflect this new requirement. Accordingly, the Draft Permit fails to assure compliance with current State Implementation Plan and Clean Air Act Nonattainment New Source Review requirements. This is so because emissions increases below the current PAL NO_x and VOC limits may be significant and subject to major NNSR preconstruction permitting requirements, but Permit No. PAL6 incorrectly states that they do not trigger these requirements. Accordingly, the Executive Director must adjust the NO_x and VOC limits in Permit No. PAL6 down by 25 tons per year to account for Harris County’s redesignation as a severe ozone nonattainment area.

This issue is ripe for review as part of the Title V renewal process despite EPA’s policy that NSR permitting decisions are generally not reviewable for compliance with State Implementation Plan requirements as part of a Title V permit review, because the State Implementation Plan regulation itself directs TCEQ to make the required changes as part of this Title V review process. 30 Tex. Admin. Code § 116.196(g); *see also In the Matter of ExxonMobil Corp., Baytown Chemical Plant*, Order on Petition No. VI-2020-9 at 13-14 (explaining that the question of whether PALs have been adjusted to account for nonattainment area designations during the PAL permit effective period is one that is ripe for review as part of the Title V permitting process). The Clean Air Act is unambiguous that neither EPA nor TCEQ may revise this State Implementation Plan requirement providing for PAL permit revisions as part of the Title V process

without first revising the State Implementation Plan. 42 U.S.C. § 7410(i). The Executive Director's failure to revise the Draft Permit consistent with this requirement renders the Draft Permit deficient, because the Draft Permit fails to accurately state and assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a).

C. Exxon's failure to use PAL monitoring, testing, and recordkeeping methods that comply with State Implementation Plan requirements invalidate Permit No. PAL6.

Texas's federally-approved PAL permit rules establish minimum requirements for monitoring systems used to determine compliance with PAL permit requirements. Specifically, PAL monitoring systems "must accurately determine all emissions of ... PAL pollutant[s] in terms of mass per unit of time," and "must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation." 30 Tex. Admin. Code § 116.186(c)(2). These regulations also provide that "[a]ll data used to establish the PAL pollutant must be revalidated through performance testing or other scientifically valid means approved by the executive director," and "[s]uch testing must occur at least once every five years after issuance of the PAL." *Id.* at § 116.186(b)(10). Texas's regulations provide that "[f]ailure to use a monitoring system that meets ... [these and other] requirements of this section *renders the PAL permit invalid.*" *Id.* at § 116.186(b)(9) (emphasis added). ExxonMobil's PAL monitoring system fails to comply with these monitoring requirements, rendering the PAL permit invalid. Accordingly, Permit No. PAL6 should be voided and removed from the Draft Permit.

There are several deficiencies with ExxonMobil's PAL monitoring system. First, monitoring established by Permit No. PAL6 does not establish a process for accurately monitoring emissions during plant upsets. Emissions during upset events must be accurately quantified and included in PAL permit compliance determinations. 77 Fed. Reg. 65119, 65120 (October 25, 2012) (approving Texas PAL program in light of commitment that "*for compliance purposes, the*

emission calculations must include emissions from startups, shutdowns, and malfunctions[.]”) (emphasis in original). ExxonMobil’s PAL permit does not establish monitoring methods for any equipment at the Baytown Olefins Plant for upset conditions and, indeed, ExxonMobil does not include emissions from upsets in its PAL compliance determinations. ExxonMobil’s failure to include upset emissions in its PAL permit compliance determinations and the TCEQ’s failure to establish clear monitoring requirements for upset emissions from units at the Baytown Olefins Plant indicate that ExxonMobil’s PAL monitoring system does not comply with applicable regulations, rendering the PAL permit invalid.

Second, the monitoring methods provided for by ExxonMobil’s standalone PAL permit as well as the combination flexible permit/PAL permit incorporated into the Draft Permit direct ExxonMobil to presume unjustifiably high destruction efficiencies during authorized operations. Accordingly, ExxonMobil’s PAL permit monitoring system does not ensure that all emissions from the Baytown Olefins Plant are accurately determined in terms of mass per unit of time. This failure renders ExxonMobil’s PAL permit invalid. *Id.* at § 116.186(b)(9).

Specifically, ExxonMobil’s standalone PAL permit contains the following special condition, which is consistent with monitoring requirements in the joint flexible/PAL Permit No. 3452/PAL6 as well as Permit No. 102982, which are incorporated by reference into the Draft Permit:

The VOC emissions shall be determined from the monitored data assuming a 98% destruction and *99% destruction of compounds with one to three carbon atoms*, when the pilot flame is present and the net heating value and flare tip velocity meet the requirements of 40 C.F.R. § 60.18 and/or § 63.1103(e)(4) as applicable; a destruction efficiency consistent with 30 TAC § 115.725(d)(7) shall be assumed for HRVOCs for periods where the heating value and velocity requirements are not met. A higher VOC destruction efficiency may be used for the multi-point ground flare (EPN FLAREXX2) if demonstrated through flare testing or vendor guarantee.

Permit No. PAL6 (12/23/2022), Special Condition No. 8.E.

While such conditions are common in TCEQ permits and are consistent with TCEQ guidance, neither TCEQ nor ExxonMobil have provided evidence that its flares achieve the represented destruction efficiency. With respect to assisted flaring at the Baytown Olefins Plant that is not subject to § 63.1103(e)(4) requirements, it is inappropriate to assume even a 98% destruction efficiency based on compliance with 40 C.F.R. § 60.18. As EPA explained at length in its Petroleum Refinery MACT and Ethylene Production MACT rulemakings, compliance with General Provisions at § 60.18 is not sufficient to ensure ongoing compliance with a 98% DRE requirement due to problems like dilution in heating value from assist media. *See* 84 Fed. Reg. 54294 (October 9, 2019) and 79 Fed. Reg. 36905 (June 30, 2014). And even in cases when assisted flares comply with § 63.1103(e)(4) requirements, such compliance is not sufficient to assure ongoing compliance with flare DRE exceeding 98%. *See*, Letter from Cynthia Kaleri, Air Permits Section Manager, EPA Region 6 to Laurie Gharis Re: Clean Air Act New Source Review Permits for the Formosa Plastics Corporation Texas, Point Comfort Chemical Complex, located in Calhoun County, Texas (“Formosa Comments”) (September 28, 2023); *see also* EPA Region 6, Quadrennial Review Comments (“Quadrennial Comments”), Non-Rule Project 2023-045-115-AI (May 8, 2023). EPA’s regulation at § 63.1103(e)(4), which ExxonMobil’s permits rely on to assure ongoing compliance with the presumed 99% DRE for flares burning certain compounds “were not designed to ensure compliance with 99% DRE.” Quadrennial Comments at 4. TCEQ’s basis for allowing presumed flare DRE exceeding 98% appears to be EPA flare studies conducted in the early 1980s. Formosa Comments at 3. EPA has explained to TCEQ that these flare studies are not sufficient to justify presumed flare DRE exceeding 98%:

EPA is generally concerned by TCEQ’s apparent reliance on flare studies conducted by EPA in the early 1980’s as the primary basis for assuming 99% DRE for all flares. As TCEQ is aware, such studies have been expanded by more recent

studies that were utilized to support ... the development of the Refinery MACT and Ethylene Production MACT.

EPA has not explicitly identified monitoring or operating requirements within the Ethylene Production MACT rulemaking ... that can ensure compliance flares will continuously achieve 99% VOC DRE. When in continuous compliance with these regulations, sources can ensure a 98% destruction efficiency to conform with the EMACT standards. *However, these regulations were not designed to ensure compliance with 99% DRE for steam-assisted, air-assisted, or non-assisted flares.*

Id. (emphasis added).

ExxonMobil's reliance on a flare monitoring system that unjustifiably presumes continuous DRE of more than 98% for certain compounds is not consistent with sound science and does not accurately determine emissions in terms of mass per unit of time, as required by TCEQ's PAL regulations, 30 Tex. Admin. Code § 116.186(c)(2), and invalidates the PAL permit.

Id. at § 116.186(b)(9).

D. The Draft Permit fails to establish a schedule for ExxonMobil to comply with PAL Permit reporting requirements.

30 Tex. Admin. Code § 116.186(b)(4)(C) provides that PAL permit holders must submit semiannual compliance reports that include, among other things: "total annual emissions (in tons per year) based on a 12-month rolling total for each month in the reporting period," and "all data relied upon, including, but not limited to, any quality assurance or quality control data, in calculating the monthly and annual PAL pollutant emissions." This requirement is part of Texas's federally-approved State Implementation Plan. 40 C.F.R. § 52.2270(c) (incorporating § 116.186 into the Texas State Implementation Plan).

ExxonMobil's Permit No. PAL6 semi-annual compliance reports since the permit was issued have failed to include data ExxonMobil relied upon to calculate reported emissions totals.⁹

⁹ Examples of ExxonMobil's noncompliant semiannual PAL reports are available electronically at: https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=1578167&Rendition=Web (Submitted on July 27, 2016); https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=4675325&R

This failure is a violation of an applicable requirement and the Draft Permit must include a schedule for ExxonMobil to correct this noncompliance. 42 U.S.C. § 7661c(a). ExxonMobil's failure to include this information has deprived the public and regulators of information necessary to determine whether ExxonMobil's PAL monitoring system complies with applicable requirements established by Texas's federally-approved PAL program and whether ExxonMobil has actually maintained emissions at the Baytown Olefins Plant below limits in Permit No. PAL6.

E. The Draft Permit fails to identify monitoring, testing, and recordkeeping methods that assure compliance with applicable Permit by Rule requirements.

Draft Permit, Special Condition No. 29 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 May 17, 2023 in the application for project 23071."

The specified PBR Supplemental Table identifies the following PBRs that have been claimed for unregistered projects at the Baytown Olefins Plant: 106.473, 106.454, 106.511, 106.512, 106.478, 106.475, 106.476, 106.263, 106.371, and 106.472. Several of these PBRs are listed as authorizing emissions from multiple emission units. Each unit authorized by PBR is subject to emission limits in the TCEQ's general PBR rule at 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 these applicable requirements. To resolve this problem, the TCEQ agreed to require operators to

[endition=Web](#) (Submitted July 27, 2018);
https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=5827282&Rendition=Web (Submitted on July 27, 2020).

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. ExxonMobil's PBR Supplemental Form fails to perform this function, because it does not provide any monitoring methods for unregistered PBRs at the Baytown Olefins Plant.

ExxonMobil's PBR Supplemental Form does provide some explanation for how compliance with registered PBRs at the Baytown Olefins Plant will be determined, but, in many cases, this additional information is incomplete and provides only general information about the kinds of information ExxonMobil will consider to determine compliance. For example, the monitoring listed for 106.511 and 106.512, which apply to several generators and engines at the plant states "[t]he operating hours and/or fuel usage of the engine are monitored and recorded." This is not helpful. Are emissions calculated using a reliable method, or by picking numbers out of a hat? For PBRs 106.473 and 106.478, which apply to various tanks at the Baytown Olefins Plant, the monitoring listed is "[w]here applicable, capacity, and true vapor pressure, volatile organic compounds content type of the stored material is recorded for containers." Again, this does not explain how emissions should be calculated to determine compliance with PBR requirements. For 106.263, which authorizes emissions during planned maintenance, startup, and shutdown activities, the monitoring listed is "[s]pecific information related to the activity including, where applicable, true vapor pressure, volatile organic compounds content type, composition, molecular weight, activity rate, or other process data used to calculate emissions is recorded." It is good that this information is recorded, but the Draft Permit must explain which information is to be considered when calculating emissions and how emissions are to be calculated.

The PBR Supplemental Table's failure to adequately explain how the Draft Permit assures compliance with PBR requirements renders the Draft Permit deficient. 42 U.S.C. § 7661c(a), (c).

This failure has also deprived members of the public of their opportunity to evaluate ExxonMobil's PBR monitoring methods for consistency with Title V. Accordingly, the Executive Director must require ExxonMobil to supplement its application and then re-notice the Draft Permit once ExxonMobil has sufficiently described how monitoring at the Baytown Olefins Plant assures compliance with PBR requirements.

III. Conclusion

The TCEQ has allowed ExxonMobil to avoid pollution control requirements for major projects at its Baytown Olefins Plant for far too long. A central feature of ExxonMobil's noncompliance is the company's reliance on inaccurate and inappropriate methods for calculating actual emissions to demonstrate compliance with permit limits. In many cases, ExxonMobil will represent unrealistically high potential emissions to obtain a high permit limit and then use a different method, which results in drastically lower emissions calculations, to demonstrate compliance with the inflated limit. It is impossible for regulators and members of the public to reliably detect this kind of malfeasance unless the TCEQ requires ExxonMobil to be transparent about how it calculates and determines compliance with its permit limits. Luckily, Title V requires just this kind of transparency. The Executive Director must require ExxonMobil to provide detailed information about how it determines compliance with emission limits addressed by these comments, determine whether these methods are appropriate and accurate, and revise the Draft Permit to include this information.

Commenters believe that ExxonMobil's compliance demonstrations and monitoring methods for Permit No. PAL6 fail to comport with applicable requirements, rendering the permit invalid. Accordingly, the permit should be invalidated and Permit No. PAL6 should be removed from the Draft Permit. If the Executive Director disagrees, he must—at the very least—adjust

downward Permit No. PAL6's limits for NOx and VOC to account for Harris County's redesignation as a severe ozone nonattainment area and establish a schedule for ExxonMobil to provide required information improperly omitted from its PAL semiannual compliance reports for many years. This much and more is required by TCEQ's federally-approved regulations at Chapters 116 and 122.

Sincerely,

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