

February 5, 2024

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Via electronic filing

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

Re: Supplementary Public Comments Concerning Draft Federal Operating Permit Renewal No. O1553, for ExxonMobil's Baytown Olefins Plant.

Air Alliance Houston, Environmental Integrity Project, and Environment Texas ("Commenters") appreciate this opportunity to file supplementary comments on Draft Renewal Permit No. O1553 ("Draft Permit") authorizing operation of ExxonMobil's Baytown Olefins Plant, located in Harris County, Texas. These comments supplement those submitted by Commenters on October 30, 2023.¹

I. INTRODUCTION

ExxonMobil is a politically connected multi-billion dollar, multi-national corporation that has lobbied for and received preferential treatment from regulatory authorities, including the TCEQ and EPA. The permitting history for ExxonMobil's Baytown Olefins Plant is replete with examples of the TCEQ and EPA helping ExxonMobil to avoid regulatory requirements or to escape serious consequences for violating regulations those same agencies are charged with enforcing. This preferential treatment has allowed ExxonMobil to avoid compliance with Clean Air Act

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¹ Available electronically at:

protections to the detriment of local air quality, public health and welfare, and overall economic development in the Houston, Galveston, Brazoria ozone nonattainment area.

Here is a representative, but not exhaustive list of improper TCEQ and EPA actions related to the Baytown Olefins Plant that have benefitted ExxonMobil:

- Public interest organizations challenging ExxonMobil's reliance on Permit No. PAL6 to avoid Prevention of Significant Deterioration ("PSD") permitting requirements in 2014 explained that ExxonMobil must still comply with PSD for PM2.5, because PAL6 did not establish a PM2.5 PAL. The Executive Director's lawyer and legal division agreed. Project File Folder, Permit No. 102982, Project No. 178224 at PDF pages 420-448 of 548.² Nonetheless, TCEQ management ignored its staff's determination without explanation. When parties challenging this decision attempted to introduce evidence of the legal department's determination at a contested case hearing, the Executive Director claimed it was privileged and blocked its introduction into evidence. This "privileged" opinion is now available in public project files.
- In 2014, at ExxonMobil's request, the TCEQ administratively reopened Permit No. PAL6 to improperly increase the PM PAL in that permit by more than 97 tons per year. This is the only time the TCEQ has administratively reopened a PAL to increase a permit limit, even though the policy basis for the revision applied to all permitting decisions concerning industrial cooling towers at the time PAL6 was issued. The TCEQ's one-time deal with ExxonMobil could not be the basis for a general policy, because it was clearly contrary to law. See Environmental Integrity Project, Air Alliance Houston, and Sierra Club's Reply to Responses to our Motion to Overturn the Executive Director's Reopening of Permit No. PAL6, TCEQ Docket No. 2014-0965-AIR (decisively refuting the Executive Director's rationale for reopening the permit).³ Shortly after the PAL permit limit was increased, a TCEQ staff-member involved with the project expressly stated during a phone call with the undersigned attorney that the purpose of this project was to allow ExxonMobil to circumvent major NSR permitting requirements for the 2014 expansion project authorized by minor Permit No. 102982 and the construction of an additional duct burner associated with that project.

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https://www14.tceq.texas.gov/epic/eCID/index.cfm?fuseaction=main.download&doc_id=870389202014220

² Available electronically at:

³ Available electronically at:

- In 2016, Environmental Integrity Project, Air Alliance Houston, and Sierra Club filed a Title V petition asking EPA to require Texas to identify ExxonMobil's Permit No. PAL6 as a "state-only" permit and to clarify that the permit did not modify any of ExxonMobil's obligations under the Texas State Implementation Plan ("SIP"). Petition for Objection to Texas Title V Permit No. O1553 for the Operation of ExxonMobil's Baytown Olefins Plant in Harris County, Texas (August 8, 2016).⁴ This should not have been controversial, as EPA had already sent ExxonMobil a letter stating as much and Title V regulations require any state-only requirements incorporated into a Title V permit to be designated as such. 40 C.F.R.§ 70.6(b)(2). Instead of granting the petition, EPA applied its new Hunter Policy to reject the petition on the grounds that state decisions implementing federal NSR authority are not ripe for review in Title V proceedings. In the Matter of ExxonMobil Corporation, Baytown Olefins Plant, Order on Petition No. VI-2016-12 (March 1, 2018). This decision is inconsistent with EPA's Title V regulation at 40 C.F.R. § 70.6(b)(2), as EPA has tacitly acknowledged in subsequent objection orders granting exactly this kind of relief. See, e.g., In the Matter of Phillips 66 Company, Borger Refinery, Order on Petition No. VI-2017-16 at 8-11 (September 22, 2021) ("As an initial matter, the EPA agrees with Petitioners' characterization of Flexible Permit No. 9868A as a 'state-only' authorization, as this permit was issued pursuant to rules that were not approved by EPA into the SIP," and noting that "EPA has objected to issuance of title V permits incorporating these state-only permits on nearly 20 occasions."). EPA invoked the Hunter policy in circumstances where it did not apply to ensure ExxonMobil could rely on state-only Permit No. PAL6 to circumvent federal NSR requirements.
- Since the issuance of Permit No. PAL6, the TCEQ has allowed ExxonMobil to artificially create headroom between actual emissions and PAL limits by declining to include upset emissions in its PAL compliance demonstrations. This violates the commitment the TCEQ made to EPA that it would require sources to include upset emissions in PAL compliance demonstrations. 77 Fed. Reg. 65119, 65120 (October 25, 2012) (approving Texas PAL program in light of TCEQ commitment that "for compliance purposes, ... emission calculations must include emissions from startups, shutdowns, and malfunctions[.]") (emphasis in original).
- The 2018 consent decree settling an enforcement case brought by EPA and the Louisiana Department of Environmental Quality, likely brought at ExxonMobil's behest, to address the ongoing release of thousands of tons of unauthorized volatile organic compound ("VOC") pollution from ExxonMobil's chemical manufacturing operations in Texas and Louisiana allowed ExxonMobil to remedy those violations with technology that was installed before the suit was brought and to rely on reductions mandated by the consent

⁴ Available electronically at: https://www.epa.gov/sites/default/files/2016-08/documents/exxonmobil baytown petition2016.pdf

decree to avoid major NSR requirements for *future* projects. Comments Regarding *United States and the Louisiana Department of Environmental Quality v. Exxon Mobil Corp. and ExxonMobil Oil Corp.*, D.J. Ref. No. 90-5-2-1-10128 (December 7, 2017) at 4-7. These concessions were contrary to EPA's standard practice. *Id.*

- In 2018, the TCEQ approved a revision to ExxonMobil's flexible/PAL permit allowing the company to report lower PM cooling tower emission rates than were used to establish the PM PAL, even though the TCEQ knew ExxonMobil had not made any changes to its cooling towers to reduce actual emissions and even though ExxonMobil declined to share with the agency any information supporting its claim that revisions to the required calculation rate were justified. *See* Project File Folder, Permit No. 3452/PAL6, Project No. 282976. This served to create additional artificial headroom under the increased PM PAL to allow continued circumvention of major NSR requirements.
- The TCEQ allowed ExxonMobil to extend the effective life of its illegal PAL permit by—at ExxonMobil's request—placing the renewal application on hold for six years (more than half the permit's effective life), despite the TCEQ's regulations requiring PAL renewals to be finalized within 180 days after the receipt of a complete application. 30 Tex. Admin. Code §§ 116.114, 116.184. This delay had two effects: First, it allowed ExxonMobil to continue to rely on unreasonably high limits in the expired PAL permit to circumvent major NSR requirements. Second, it allowed ExxonMobil to rely on outdated and unrepresentative emission rates submitted with ExxonMobil's PAL renewal application in 2015 to support renewal of the permit in 2022. Executive Director's Response to Public Comment, ExxonMobil Corporation, Permit No. PAL6 at 4 ("Renewal Response to Comments").⁷

As this list makes clear, Permit No. PAL6 has been the vehicle for a lion's share of the improperly lax treatment ExxonMobil's Baytown Olefins Plant has received from the TCEQ over the years. This permit establishes plantwide limits and, so long as ExxonMobil maintains emissions below the plantwide limits, projects that increase the amount of pollution emitted from

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Everyone has a right to breathe clean air.

⁵ Available electronically at: https://environmentalintegrity.org/wp-content/uploads/2017/02/ExxonMobilCDAnalysis.pdf

⁶ Available electronically at:

⁷ Available electronically at: https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=7068617&R endition=Web

the Baytown Olefins Plant are not subject to stringent Nonattainment New Source Review ("NNSR") and PSD preconstruction permitting requirements. The limits in Permit No. PAL6 are too high and the monitoring requirements used to determine compliance with the permit's overly generous limits are unclear, unreliable, and in many cases illegally hidden from public scrutiny. Accordingly, ExxonMobil has been able to construct multiple expansion projects that each significantly increased the amount of pollution emitted by the Baytown Olefins Plant without complying with NNSR requirements, including pollution offset requirements and the most stringent technology-based pollution controls in the Clean Air Act. These stringent requirements are intended to improve air quality in areas, like the Houston, Galveston, Brazoria severe ozone nonattainment area, that are failing to comply with federal health and welfare-based National Ambient Air Quality Standards.

The TCEQ issued Permit No. PAL6 in 2005, even though the agency did not have the authority to establish this kind of permit. The terms of this permit fall far short of what federal law requires and the TCEQ has repeatedly declined to correct its serious shortcomings. But the TCEQ is not the only agency responsible for the harm this permit has caused. In 2012, EPA sent ExxonMobil a letter correctly stating that the TCEQ did not have the authority to issue PAL6 and that the permit could not be used to allow ExxonMobil to avoid federal NNSR and PSD requirements. Letter from John Blevins, EPA Region 6, Director, Compliance Assurance and Enforcement Division to Evelyn R. Ponton, Environmental Coordinator, ExxonMobil Corporation, dated March 6, 2012. Despite EPA's determination and contrary to EPA's duty to take action to prevent violations of NNSR and PSD requirements, *see e.g.* 42 U.S.C. § 7413, the agency has done nothing to prevent ExxonMobil from using this permit to construct multiple expansion projects without complying with federal NNSR and PSD requirements.

Commenters have spent many, many hours working to encourage the TCEQ to bring PAL6 into compliance with federal law and to prevent ExxonMobil's malfeasance. We challenged the authorization of multiple expansion projects undertaken in reliance on Permit No. PAL6 in TCEQ contested case hearings. We opposed the TCEQ action to unilaterally increase the particulate matter limit in Permit No. PAL6. We opposed the renewal of PAL6. We petitioned EPA to clarify that Permit No. PAL6 is a state-only authorization and when EPA denied that petition, we appealed that decision to the Fifth Circuit Court of Appeals. But this work has not produced any results benefiting the thousands of Texans who are exposed to air pollution from the Baytown Olefins Plant daily. Our work has not been fruitless because we are wrong on the law or the facts. We have only failed because the government agencies responsible for protecting Texans have been unwilling to say "no" to this corporate giant. We have only failed because the TCEQ and EPA have failed us.

But Commenters will not give up on this issue and these comments provide the TCEQ (and ultimately EPA) another opportunity to do the right thing: to void Permit No. PAL6, to require ExxonMobil to comply with NNSR and PSD permitting requirements for projects improperly constructed in reliance on Permit No. PAL6, and to require ExxonMobil to comply with these requirements for future projects at the Baytown Olefins Plant. And even though EPA and the TCEQ have gone to great lengths to keep us from pursuing this issue as part of the Title V permit review process—arguing that NSR related permitting decisions should only be addressed through the NSR permitting process or through and enforcement case—at least one avenue remains open to us now.

Both EPA and the TCEQ's regulations for PAL permits contain a provision ripe for review as part of this process that, as we demonstrated in our initial comments and demonstrate further

below, requires the TCEQ to void Permit No. PAL6 and remove it from the Draft Permit. Specifically, 40 C.F.R. § 52.21(aa)(12)(i)(d) and 30 Tex. Admin. Code § 116.186(b)(9) provide that an operator's failure to use a monitoring system that complies with heightened PAL program monitoring system requirements invalidates the PAL permit. This provision is not considered as part of the PAL application review process and it is not an issue reserved primarily for enforcement. It is a self-executing provision meant to protect the public from operators who game the permitting process by obtaining PAL limits based on methodologies that overstate actual emissions and then demonstrating compliance with the inflated limits using different methods that understate actual emissions. As we explain at length in these comments, ExxonMobil has gamed the system in just this way for many years, and, as a result, Permit No. PAL6 is invalid. Because the PAL permit is invalid, it must be removed from the Draft Permit, and the Draft Permit must be revised to clearly require ExxonMobil to comply with NNSR and PSD permitting requirements in the Texas SIP for past and future projects at the Baytown Olefins Plant. 42 U.S.C. § 7661c(a).

It is long past time for the TCEQ (and the EPA) to end its sweetheart relationship with ExxonMobil and to require the company to bring its operations in Texas into compliance with federal and state law. To that end, and for the reasons laid out below and in our previous comments on the Draft Permit, we ask the Executive Director to:

- Acknowledge that ExxonMobil's failure to comply with PAL permit monitoring requirements has rendered Permit No. PAL6 invalid, as required by 30 Tex. Admin. Code § 116.186(b)(9);
- Void Permit No. PAL6 and establish a schedule for ExxonMobil to submit an application to reauthorize minor projects authorized in reliance on the invalid PAL permit to comply with Prevention of Significant Deterioration ("PSD") and Nonattainment New Source Review preconstruction permitting requirements, as required by 42 U.S.C. § 7661c(a);
- Revise the Draft Permit to clarify that Permit No. PAL6 may not be used to determine PSD or NNSR applicability for future projects. *Id.*;

- Require ExxonMobil to supplement its publicly-available Title V renewal application to identify with specificity the monitoring methods ExxonMobil must comply with to determine emissions from all units subject to NSR preconstruction permitting requirements, including those authorized by Permit by Rule and TCEQ standard permits, as required by 42 U.S.C. § 7661c(a), (c);
- Review this supplementary application material and revise the Draft Permit to ensure that all monitoring requirements are clearly specified, publicly-available, and are sufficient to assure compliance with applicable requirements. *Id.* And;
- Require ExxonMobil to re-notice the Draft Permit to allow members of the public to review the updated permit.

II. ISSUES

A. ExxonMobil's Failure to Use a Proper PAL Monitoring System Invalidated Permit No. PAL6.

Texas's federally-approved Plantwide Applicability Limit ("PAL") regulations include heightened monitoring provisions requiring PAL monitoring systems to "accurately determine all emissions of ... PAL pollutant[s] in terms of mass per unit of time," and mandates that such monitoring systems "must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation." 30 Tex. Admin. Code § 116.188(c)(2). Additionally, the rules 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 that "[s]uch testing must occur at least once every five years after issuance of the PAL." *Id.* at § 116.186(b)(10). Importantly, failure to adhere to these requirements, among others, renders a PAL permit invalid. *Id.* at § 116.186(b)(9). These regulations apply to the

following plantwide emissions limits in Permit No. 3452/PAL6 incorporated by reference into the Draft Permit:⁸

Pollutant	Limit (tons per year)
NOx	2,448.71
VOC	435.77
СО	2381.15
PM	463.55
SO2	182.79
H2SO4	17.94

Permit No. 3452/PAL6 at 17 (Maximum Allowable Emission Rates Table).

In our initial comments on the Draft Permit's renewal, we demonstrated that ExxonMobil's Permit No. PAL6 is invalidated due to ExxonMobil's non-compliant monitoring systems, which fail to accurately determine upset and flare emissions in terms of mass per unit of time. ExxonMobil's flare emissions are primarily VOC. As explained at length below, further grounds for the invalidation of Permit No. PAL6 arise from ExxonMobil's failure to use a compliant monitoring system to determine compliance with its CO PAL and PM PAL.

1. Carbon Monoxide Emissions from ExxonMobil's Decoking Activities are Not Properly Monitored.

Relevant Emission Units/Unit Groups

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Authorizing Permit No.	EPNs
3452	CAF01-DEC, CBF01-DEC, CCF01-DEC,
	CDF01-DEC, CEF01-DEC, CFF01-DEC,
	CGF01-DEC, CHF01-DEC, CIF01-DEC,
	CJF01-DEC, COF01-DEC, CQF01-DEC,
	XAF01-DEC, XBF01-DEC, XCF01-DEC,
	XDF01-DEC, XEF01-DEC, XFF01-DEC,
	XGF01-DEC,
102982	XXAB-DEC, XXCD-DEC, XXEF-DEC,
	XXGH-DEC

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⁸ The regulations also apply to the stand-alone version of Permit No. PAL6 that has not yet been incorporated into the Draft Permit.

Neither the Draft Permit nor the Statement of Basis describe how the CO PAL in Permit No. PAL6 was established or how ExxonMobil must determine compliance with the limit. This renders the Draft Permit deficient for failing to specify a monitoring method that assures compliance with the limit. 42 U.S.C. § 7661c(a), (c). But a review of relevant permitting documents for Permit No. PAL6 establishes that clarifying the applicable compliance demonstration method and re-noticing the Draft Permit is not sufficient to resolve the Draft Permit's deficiency. Instead, Permit No. PAL6 should be removed from the Draft Permit because ExxonMobil's failure to use a proper monitoring system has invalidated the PAL permit.⁹

ExxonMobil's application to renew its PAL permit identified baseline actual emissions of 1,200.55 tons per year, based on average annual emissions from 2011 to 2012. Permit Renewal Source Analysis & Technical Review at 5. 10 ExxonMobil relied on these baseline actual emissions as well as potential emissions from some units that had not been operating for two years during the baseline period to convince the Executive Director that the CO PAL should not be adjusted downward on renewal. 30 Tex. Admin. Code § 116.196(f). EPA submitted comments asserting that ExxonMobil's baseline actual emissions are approximately 50 percent higher than CO emissions ExxonMobil had reported to the TCEQ's Emissions Inventory in 2017 (676 tons), 2018 (591 tons), 2019 (662 tons), and 2020 (522 tons), and asked the Executive Director to explain the large discrepancy between the emissions ExxonMobil reported to the Emissions Inventory and baseline actual emissions identified in the renewal application. Renewal Response to Comments at 7.

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⁹ It is not enough to simply invalidate the CO PAL and remove it from Permit No. PAL6. The TCEQ's regulations clear differentiate between a particular PAL, defined by 30 Tex. Admin. Code § 116.12(24), and a PAL permit, which contains one or more PAL limits. *Id.* at § 116.12(27). Texas's regulation clearly provides that failure to use a proper monitoring system invalidates a PAL *permit*.

¹⁰ Available electronically at:

https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=7068621&R endition=Web

The Executive Director responded that ExxonMobil used the same methods to calculate CO emissions for its Emissions Inventory submissions and its PAL renewal application with the sole exception of furnace decoking emissions. Id. at 8. According to the Executive Director, decoking emissions used to calculate baseline actual emissions were based on the compliance method required by Permit No. 3452/PAL6, Special Condition No. 27.H, while Emissions Inventory submissions were estimated using engineering estimates of coke formation. Id. According to the Executive Director, reliance on the permit estimation method was appropriate because it provided "for consistency with the basis of the PAL limits, which the EI approach uses engineering estimates." Id. However, the Executive Director did not explain why ExxonMobil's permit calculation method and engineering estimates of coke formation rendered such widely different results.

A review of ExxonMobil's publicly available permitting documents did not shed additional light on the issue. Neither the version of Permit No. 3452/PAL included in the Draft Permit, the subsequently-issued standalone version of PAL6, nor any application files available to members of the public—at least none Commenters could find—explains specifically how CO emissions during decoking activities are determined for establishing or monitoring compliance with the CO PAL. The Special Condition identified by the Executive Director, Permit No. 27.H of Permit No. 3452/PAL6, does not specify a method for determining CO emissions during decoking activities and instead directs ExxonMobil to determine CO emissions based on application representations. ExxonMobil's 2015 PAL renewal application explains that CO emissions from decoking activities are calculated using the following method, based on Special Condition No. 27.H: (Gasified coke rate) * (emission factor) * (annual decokes), but does not identify the relevant emission factor or the permit application establishing this compliance method.

Complicating matters further, ExxonMobil subsequently updated its CO emission monitoring/calculation methodology for decoking activities and designated that revised methodology as considered confidential business information:

ExxonMobil has updated [the] emission estimation methodology for CO and PM emission rates for decoking operations. Table E-1 provides the updated CO and PM actual emissions calculations for furnace decoking operations for 2011-2014, which are the years used for verifying the PAL caps. The emission calculations in Table E-1 are considered CONFIDENTIAL.

Letter from James Barron to Richard Goertz, Response to August 28, 2015 NOD, Permit No. PAL 6, dated September 28, 2015.¹¹

Because ExxonMobil updated its decoking CO (and PM) emission calculation process after it filed its PAL6 application, it's not even clear that ExxonMobil is using the methodology listed in its public application to renew PAL6 to determine compliance with its CO PAL. Presumably, it is not, as this change resulted in updated emission calculations. And from the limited number of PAL6 compliance reports the TCEQ has made available through its electronic records system, it appears that ExxonMobil's method for determining CO emissions has varied from year to year since 2015.¹²

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¹¹ This claim of confidentiality is improper for two reasons. First, ExxonMobil's decoking emissions calculation process was used to establish permit limits and is to be used to determine compliance with those limits. It is an enforceable permit term and enforceable permit terms are public information as a matter of law. 42 U.S.C. § 7661b(e). Second, the basis for calculating actual emissions from the Baytown Olefins Plant for purposes of complying with permit limits is "emissions data" under the Clean Air Act and emissions data is public information as a matter of law. 40 C.F.R. § 2.301(a)(2)(i). ExxonMobil's Draft Permit must be revised to make this information publicly available. 42 U.S.C. § 7661c(a), (c).

¹² We are unable to provide more recent PAL6 compliance information as the TCEQ has failed to provide us with this information or to make it available on its e-file website, even though Environmental Integrity Project filed a Public Information Act request asking for it in June 2023. Our request was assigned the tracking number PIR 23-84463. Correspondence with the TCEQ concerning this request is available upon request.

Reporting	2015	2016	2017	2018	2019
Period					
(9/1 –					
8/31)					
CO tons	464.9458	434.0148	676.25	591.573	662.1836
(EI)					
CO tons	1227.9	574.37	656.21	603.19	850.54
(PAL6)					

In 2015, ExxonMobil's Emissions Inventory submission was approximately 38 percent of emissions estimated in the Company's PAL6 compliance report for the same period. This divergence is much greater than suggested by the comparison of EI and PAL emissions in ExxonMobil's PAL renewal application. In 2016, ExxonMobil's PAL6 and Emissions Inventory submissions were much closer, with its Emissions Inventory submission accounting for approximately 76 percent of the CO emissions estimated over the same period in the PAL6 compliance report. This divergence is less significant than indicated by ExxonMobil's PAL renewal application. The following year, ExxonMobil's PAL6 report estimated fewer CO emissions than the Company's Emissions Inventory report. That should not happen if the Executive Director's account of differences between ExxonMobil's baseline actual emissions and Emissions Inventory submissions is true. If the only difference between the two methodologies is ExxonMobil's use of a method that results in higher CO decoking emissions for PAL reporting, then ExxonMobil's PAL reports should never estimate emissions lower than reported to the Emissions Inventory for the same period. In 2018, the estimates are nearly identical. Then, in 2019, like 2016, ExxonMobil's Emissions Inventory estimate is approximately 76 percent of the total CO emissions reported in the PAL6 compliance report.

CO emissions in ExxonMobil's PAL reports and its Emissions Inventory submissions because ExxonMobil's semiannual PAL reports do not include supporting data and emissions calculations,

as required by 30 Tex. Admin. Code § 116.186(b)(4)(C)(iii). The TCEQ must revise the Draft Permit to establish a schedule for ExxonMobil to submit this information for all past Permit No. PAL6 semiannual reports and to require ExxonMobil to submit it with future reports. 42 U.S.C. § 7661c(a).¹³

Whatever the reason, emissions identified in ExxonMobil's PAL reports should not depart significantly from emissions the Company reports to the Emissions Inventory. The TCEQ's PAL heightened PAL monitoring requirements provide that PAL monitoring systems must "accurately determine all emissions of the PAL pollutant in terms of mass per unit of time." 30 Tex. Admin. Code § 116.186(c)(2). Similarly, the TCEQ's Emissions Inventory guidance requires emissions to be determined using the most accurate method available:

To ensure accuracy and consistency, the TCEQ accepts only a limited number of determination methodologies, issues specific guidance on their use, and further requires that all emissions be determined using the best methodology available for EI purposes.

. . . .

If emissions data from multiple determination methodologies exist for a given source, and a regulated entity believes that data from a less preferred determination methodology more accurately represents the source's emissions than data from a more preferred methodology, the regulated entity *must* present its argument in writing to the TCEQ and request that the agency review and approve the exception to the order of preference outlined in this document.

TCEQ, 2021 Emissions Inventory Guidelines, RG-360/21 at 41-42.14

Everyone has a right to breathe clean air.

¹³ The compliance schedule should also direct ExxonMobil not to designate this information "confidential." The data and methodologies ExxonMobil relies on to demonstrate compliance with PAL permit limits is public information as a matter of law. *See* note 11, *supra*.

¹⁴ The guidance is available electronically at: https://www.tceq.texas.gov/downloads/air-quality/point-source/guidance/rg-360-21.pdf Previous versions of this guidance have included these same requirements.

The Executive Director, moreover, has determined that the TCEQ's Emissions Inventory is a reliable basis for members of the public to determine whether emissions increases at a source trigger major NSR netting requirements:

[The] Applicant must file annual emissions inventory (EI) report for the site that is publicly accessible. The EI report may be used by the public to determine if there are any significant emission changes at the site that may potentially trigger NA and/or PSD netting requirements.

Notice of Proposed Permit and Executive Director's Response to Public Comment, Permit No. O3764 at 20 (May 10, 2017).¹⁵

The purpose of PAL permits is very similar: to determine whether increases at a source trigger PSD and/or NNSR preconstruction permitting requirements. Because both programs may be used for the same purpose—determining major NSR applicability—and because both programs establish heightened monitoring requirements, emissions reported by a company to the Emissions Inventory should be very similar to emissions reported by that company for PAL compliance. ExxonMobil's CO emissions estimated for PAL compliance—however they are calculated—often diverge sharply from emissions reported to the Emissions Inventory. Most significantly, ExxonMobil's PAL permit CO emissions from the baseline period identified in the renewal application (2011-2012) diverge significantly from its Emissions Inventory report for the same years. This divergence within the effective life of Permit No. PAL6 was used to justify an inappropriately high CO PAL limit on renewal and should be sufficient invalidate the PAL permit. 30 Tex. Admin. Code § 116.186(b)(9).

But there is more. Commenters have been unable to find any evidence that ExxonMobil validated data used to establish and determine compliance with the CO PAL every five years, as

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¹⁵ Available electronically at:

required by 30 Tex. Admin. Code § 116.186(b)(10). ¹⁶ Because ExxonMobil's CO monitoring and calculation methods for PAL6 have never been publicly available, members of the public did not have an opportunity to meaningfully assess the accuracy of the PAL6 CO limit when the permit was first issued in 2005 or when it was renewed in 2022. The provision in Texas's federally-approved PAL rule stating that failure to use a compliant PAL monitoring system invalidates a PAL permit is meant to prevent exactly this kind of situation. 30 Tex. Admin. Code § 116.186(b)(9). The Executive Director should clarify that Permit No. PAL6 is invalid, void the permit, and remove it from the Draft Permit. 42 U.S.C. § 7661c(a) ("Each permit ... shall include enforceable emission limits and standards ..., and such other conditions as are necessary to assure compliance with applicable requirements of this chapter, including the requirements of the applicable implementation plan.").

2. Particulate Matter Emissions from ExxonMobil's Cooling Towers are Not Properly Monitored.

Relevant Emission Units/Unit Groups

Authorizing Permit No.	EPNs
3452	BOPCT and BOPTXCT

When Permit No. PAL6 was issued in 2005, it did not include particulate matter ("PM") emissions from ExxonMobil's cooling towers. These emissions were excluded from PAL6 and ExxonMobil's flexible permit because monitoring methods available at the time were considered unreliable and because PM emissions from cooling towers were (incorrectly) presumed to be insignificant:

results to the Executive Director as required by 30 Tex. Admin. Code § 116.186(b)(4)(D), (10).

¹⁶ This provision requires operators to provide the results of such validation testing to the Executive Director. The fact that the Executive Director was not even aware how ExxonMobil determined CO emissions under the PAL at the time of renewal until Exxon submitted its *confidential* response to the Executive Director's August 28, 2015 Notice of Deficiency strongly suggests that ExxonMobil has not validated its monitoring method and supplied the

When the PAL was authorized in the permit in 2005 (Project 127553), the PM PAL did not include contributions from the existing cooling towers (EPNs BOPCT and BOPXCT).... TCEQ Air Permits Division practices at that time recognized that cooling towers were a source of PM but, in consideration of the difficulties in monitoring or accurately quantifying, PM limits were not included on the MAERT.

Technical Review Document, Permit No. 3452/PAL6, Project No. 198806.¹⁷

In 2014, the Executive Director reopened Permit No. PAL6 to increase the PM PAL in that permit to account for emissions from these cooling towers, even though those emissions had not been authorized. The PM PAL was increased by 97.93 tons per year—from 365.62 tons per year to its current level of 463.55 tons per year—based upon emissions reported for the baseline period 1999-2000, five years before the PAL permit was issued and 15 years prior to the reopening. These baseline actual emissions are impermissibly stale, did not provide a reliable account of actual emissions at the time the PM permit limit was increased, and were inconsistent with regulations regarding the appropriate contemporaneous period for major NSR determinations. *See* 40 C.F.R. § 52.21(b)(48)(ii) (providing that the contemporaneous period for baseline actual emissions is up to ten years prior to the submission of a complete permit application); *see also* 30 Tex. Admin. Code § 116.12(3)(B). The credibility of these baseline actual emissions is further eroded by the fact that they were based on the very same emissions monitoring and calculation methodology that led to the Executive Director's policy of excluding cooling tower PM emissions from TCEQ permits. Though more accurate information about cooling tower PM emissions was available at

¹⁷ This document is not available through the TCEQ's e-filing website.

¹⁸ As made clear by Environmental Integrity Project, Air Alliance Houston, and Sierra Club's Reply to Responses to our Motion to Overturn the Executive Director's Reopening of Permit No. PAL6, TCEQ Docket No. 2014-0965-AIR, one effect of this increase was to allow ExxonMobil to circumvent PSD requirements when authorizing PM emissions from these existing cooling towers. That is exactly what has happened. See Executive Director's Response to Public Comment, Permit No. 3452 at 4-5. Available electronically at: https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=7636706&Rendition=Web

the time of the reopening, the Executive Director—at ExxonMobil's behest—declined to use it to increase the PM PAL:

The Executive Director recognizes the limitations of the emission factors published in AP-42, Chapter 13.4. While the development and use of site-specific factors may provide more accurate emissions estimations, the published factors should provide an estimate that is reasonably conservative and consistent with the approach used for similar facilities. In [the] absence of factors developed during the baseline period, the Executive Director's position is that historic determinations should be based on the best information available at that time.

Executive Director's Response to Public Comment, Permit Reopening, ExxonMobil Corporation Baytown Olefins Plant at 3.¹⁹

ExxonMobil's request to reopen its PAL and the reopened permit reflect PM emissions from ExxonMobil's cooling towers calculated presuming a 0.01 percent drift rate. *See* Permit Alteration Request, ExxonMobil Corporation, Baytown Olefins Plant, Permit No. 3452/PAL6/PSDTX302M2 (March 9, 2018) (identifying PM cooling tower monitoring requirements established through the reopening based on a 0.01 percent drift rate). However, in 2018, ExxonMobil applied for a revision to PAL monitoring requirements in Permit No. 3452/PAL6. The requested change allowed ExxonMobil to use a different, lower design drift factor to calculate PM emissions from the Company's cooling towers. *Id.* The specific design drift rates ExxonMobil wished to use were not identified in the application and Commenters have been unable to find any public information identifying the relevant drift rates or providing evidence

https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=3747088&R endition=Web The relevant application document is on PDF page 8/127.

¹⁹ EPA gave its AP-42, Chapter 13.4 emission factors "D" and "E" ratings. EPA describes D rated emission factors as "[b]elow average" and E rated emission factors as "[p]oor." AP-42, Vol. I, Introduction at 10. Emissions calculations based on below average and poor emission factors does not meet the heightened monitoring and reporting requirements for PAL permits. Indeed, the TCEQ's own policy of excluding cooling tower emissions from permits based on the unreliability of available emission factors in 2005 indicates that these emission factors are not appropriate to use for permitting purposes, even in the absence of heightened monitoring and emissions calculation requirements.

²⁰ Available electronically at:

that the use of lower drift rates is justified. Moreover, ExxonMobil has not submitted an application to authorize physical or operational changes at its cooling towers that would affect their design drift rate since construction. Thus, ExxonMobil likely knew the 0.01 percent drift rate representation was inaccurate at the time it submitted its PAL reopening request.

The discrepancy between the method ExxonMobil used to calculate the PM contribution from its cooling towers to the PM PAL in PAL6 in 2014 and to determine compliance with that limit from 2014 to 2018, and its method(s) for calculating emissions for purposes of demonstrating compliance with the PM PAL after 2018 artificially create headroom between the permit limit and reported actual emissions demonstrating compliance with the limit without reflecting any real change in the amount of pollution emitted at the plant.

The Draft Permit's failure to specify the drift rates ExxonMobil must use to calculate PM emissions from its cooling towers renders the Draft Permit incomplete. 42 U.S.C. § 7661c(a), (c). However, the Executive Director cannot remedy this defect by revising the Draft Permit to specify the relevant drift rate(s), providing a justification for the reasonableness of those rates, and renoticing the Draft Permit to allow members of the public to comment on its cooling tower monitoring requirements. ExxonMobil's manipulation of the permitting process in this way and its reliance on inaccurate emissions factors and drift rates to establish the PM PAL and to determine compliance with that limit from 2014 until at least 2018 is inconsistent with PAL monitoring requirements in Texas's PAL regulations and invalidate Permit No. PAL6. 30 Tex. Admin. Code § 116.186(b)(9). This conclusion is further bolstered by ExxonMobil's failure validate the data used to establish the increased PM PAL or to determine compliance with it every five years (and to report the results of such validation testing to the Executive Director), as required by 30 Tex. Admin. Code § 116.186(b)(10).

3. Volatile Organic Compounds from ExxonMobil's Flares are Not Properly Monitored.

Relevant Emission Units/Unit Groups

Authorizing Permit No.	EPNs
3452	FLARE1, FLARE2, FLAREX
102982	FLAREXX1, FLAREXX2

Our initial comments on the Draft Permit explained that ExxonMobil's PAL6 monitoring requirements fail to accurately determine VOC emissions from the company's flares and that this failure is sufficient to invalidate the PAL permit. Initial Comments at 12-14. Here, we provide two additional datapoints further establishing that ExxonMobil has failed to use a monitoring system that complies with 30 Tex. Admin. Code § 116.186 requirements to accurately determine emissions from its flares. This failure has allowed ExxonMobil to repeatedly underreport VOC emissions and to avoid NNSR permitting requirements for projects at the Baytown Olefins Plant.

First, in 2018 ExxonMobil entered into a consent decree to resolve an EPA enforcement action arising from the company's unauthorized emission of thousands of tons of VOC on an annual basis from its chemical plants in Texas and Louisiana, including the Baytown Olefins Plant. Consent Decree, *United States and the Louisiana Department of Environmental Quality v. Exxon Mobil Corp, et al.*, Civil Action No. 4:17-cv-3302 (June 6, 2018).²¹ The Consent Decree asserts that compliance with its requirements would reduce emissions of VOC by 7,061 tons per year "between January 1, 2013 and full implementation of the Consent Decree's compliance requirements[.]" *Id.* But ExxonMobil only reported combined VOC emissions of 972 tons from all the flares covered by the Consent Decree in its 2012 emissions inventory submissions and ExxonMobil's permits at the time of the Consent Decree only authorized 1,100 tons per year of VOC emissions from the covered flares. Comments Regarding *United States and the Louisiana*

²¹ Available electronically at: https://www.epa.gov/sites/default/files/2018-06/documents/exxonmobilcorp-cd.pdf

Department of Environmental Quality v. Exxon Mobil Corp. and ExxonMobil Oil Corp., D.J. Ref. No. 90-5-2-1-10128 (December 7, 2017) at 4-7. ExxonMobil did not report VOC from its Baytown Olefins Plant flares consistent with the Consent Decree's representation of significant unauthorized emissions in its PAL6 semiannual reports or its Emissions Inventory submissions prior to entry of the decree. This suggests that flare monitoring requirements in Permit No. 3452/PAL6 failed to accurately determine the amount of pollution being emitted by those flares. This further establishes that the monitoring requirements in that permit do not accurately determine flare emissions in terms of mass per unit of time, as required by 30 Tex. Admin. Code § 116.186(c)(2). Moreover, there is no evidence that ExxonMobil conducted validation testing and submitted the results of that testing to the Executive Director for Permit No. PAL6's assumption that compliance with permit's requirements ensures "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" as required by § 116.186(b)(4)(D).

Second, a memorandum describing RTI International's analysis of comments EPA received as part of its proposed revisions to the NESHAP for petroleum refineries to ensure that refinery flares achieve a minimum destruction efficiency of 98 percent includes test data indicating that flares at sources that vent large amounts of olefins, like propylene, have difficulty continuously achieving the 98 percent destruction efficiency required by the rule. This test data demonstrates that provisions in ExxonMobil's permits authorizing flares, including Permit No. PAL6, directing the Company to presume its flares continuously achieve a 99 percent destruction efficiency for compounds, like propylene, with three carbon atoms or fewer is unjustified and fails to assure compliance with VOC emission limits calculated using this presumption. RTI International

Memorandum, From Jeff Coburn to Adrew Bouchard and Brenda Shine, EPA/OAQPS, Re: Flare Control Option Impacts for Final Refinery Sector Rule (July 31, 2015). ²² Specifically, the memo explains that the presence of hydrogen and olefins (hydrocarbons with double bonds, like propylene) in flare gas can significantly reduce a flare's destruction efficiency. *Id.* at 7-9. While the memorandum concludes that specific requirements addressing the hydrogen-olefin interaction should not be finalized in EPA's 2015 refinery rulemaking, *Id.* at 5, the memorandum and the study it relies on do suggest that it is unreasonable to presume that compliance with the 270 BTU/scf NHV_{cz} requirement in Permit Nos. 3452/PAL6, PAL6, and 102982 assures compliance with the 99 percent destruction efficiency for compounds with three or fewer carbon atoms. ExxonMobil flares significant quantities of propylene, which has three carbon atoms, and other olefins. ²³

EPA's consent decree with ExxonMobil and flare studies and information in the docket for EPA's 2015 petroleum refinery NESHAP rulemaking demonstrate that monitoring requirements in ExxonMobil's PAL permit directing the company to presume a destruction efficiency of 99 percent for certain compounds do not accurately determine actual emissions from ExxonMobil's Baytown Olefins Plant flares in terms of mass per unit of time and are inconsistent with sound science, as required by 30 Tex. Admin. Code § 116.186(c)(2). Accordingly, ExxonMobil's PAL permit is invalid and should be removed from the Draft Permit. *Id.* at § 116.186(b)(9). If the Executive Director disagrees that the PAL permit has been invalidated, she must still revise the Draft Permit to include flare monitoring requirements that assure compliance with applicable VOC and HAP

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²³ For example, in 2021, ExxonMobil Emissions Inventory Questionnaire estimated that the following propylene emissions from its Baytown Olefins Plant flares:

Flare	FLARE1	FLARE2	FLAREX
Propylene	5.1529	15.0448	2.4993
Reported (Tons)			

²² Available electronically at: https://downloads.regulations.gov/EPA-HQ-OAR-2010-0682-0748/content.pdf

emission limits and operating requirements in Permit Nos. 3452/PAL6, PAL6, and 102982. 42 U.S.C. § 7661c(a), (c).

B. The Draft Permit is Deficient Because it Fails to Establish a Schedule for ExxonMobil to Properly Authorize Cooling Tower PM Emissions.

If an operator has failed to comply with applicable requirements at the time a Title V permit is issued or renewed, the Title V permit must include a schedule for the operator to come into compliance. 42 U.S.C. § 7661c(a). The Draft Permit is deficient because it fails to establish a schedule for ExxonMobil to obtain a proper authorization for PM emissions from two of its cooling towers—BOPCT and BOPTXCT—that were improperly included in the Maximum Allowable Emission Rate Table ("MAERT") of Permit No. 3452 upon renewal. Upon renewal, Permit No. 3452 authorized these two cooling towers to emit 167.18 tons of PM, 42.88 tons of PM₁₀, and 0.27 tons of PM_{2.5} per year. MAERT, Permit No. 3452, Project No. 240826.²⁴ Prior to renewal, Permit No. 3452 did not authorize these cooling towers to emit any PM. Permit Renewal Source Analysis & Technical Review, Permit No. 3452, Project No. 240826 ("TRV") at 1 (listing allowable PM emission rates for these cooling towers prior to renewal as "N/A."

The Executive Director's Response to Comments regarding the renewal of Permit No. 3452 does not directly identify the source of the agency's authority to establish new permit terms specifically authorizing PM emissions from these two cooling towers. Instead, the Technical Review document explains that the new limits do "not trigger PSD since they are included in the existing PAL caps in accordance with 30 TAC 116.190" and that, pursuant to 30 Tex. Admin. Code

²⁴ Available electronically at:

https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=7636709&Rendition=Web

²⁵ Available electronically at:

https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_EXTERNAL_SEARCH_GET_FILE&dID=7628994&Rendition=Web

§ 116.721, inclusion of the new limits do not require a permit amendment. TRV at 5-6. Texas's flexible permit program rules do not authorize the TCEQ to establish new limits in a MAERT through renewal. See 30 Tex. Admin. Code §§ 116.760 (providing that flexible permits will be renewed in accordance with the TCEQ's Chapter 116, Subchapter D regulations), 116.310-116.315 (renewal regulations do not include authority to increase allowable emissions). Instead, changes to an existing flexible permit increasing allowable emissions must be made as an alteration or an amendment. Id. at § 116.721(a), (b). Because the Executive Director states that ExxonMobil's flexible permit was not amended to establish new PM emission limits for the two cooling towers, that means the new limits were established as an alteration. Id. at § 116.721(b)(1) ("A flexible permit alteration is for any variation from a representation in a flexible permit application or a general or special provision of a flexible permit that does not require a flexible permit amendment.").

Flexible permit alterations are not subject to public notice and comment requirements and are not subject to review as part of the permit renewal process. *Id.* at § 116.311 (identifying application demonstration requirements for permit renewals). Accordingly, the addition of MAERT terms authorizing ExxonMobil's two cooling towers to emit nearly 170 tons per year of PM has not been subject to public notice and comment procedures and evaluation of these limits as part of the Title V renewal process is not subject to exclusion under EPA's Hunter policy. *In the Matter of PacifiCorp Energy, Hunter Power Plant*, Order on Petition No. VIII-2016-4 at 11, n21 (The Hunter policy only applies "where a permitting authority issued a source-specific title I preconstruction permit subject to public notice and comment and for which judicial review was available.").

According to 30 Tex. Admin. Code § 116.721(a), the following kinds of permit changes require an amendment and may not be authorized by an alteration:

[I]t shall be unlawful for any person to vary from ... [enforceable application] representation[s] or flexible permit provision[s] if the change will cause a change in the method of control of emissions or the character of the emissions, will relax emission controls, or will result in a significant increase in emissions unless application is made to the executive director to amend the flexible permit in that regard and such amendment is approved by the executive director or commission.

To determine whether changes to an existing flexible permit result in a significant increase in emissions, 30 Tex. Admin. Code § 116.718 provides (emphasis added):

An increase in emissions from operational or physical changes at an existing facility authorized by a flexible permit for purposes of minor new source review under this subchapter, if the increase does not exceed either the emission cap or individual emission limitation.

The change to Permit No. 3452's MAERT establishing ExxonMobil to emit more than 167 tons per year of PM from two of its cooling towers exceeds the PM emission cap prior to the change and establishes new limits for the cooling towers that did not exist prior to the change. Accordingly, the inclusion of the new PM limit requires a permit amendment. ExxonMobil has not submitted an amendment application and the Executive Director has not approved an amendment to establish the new limit. Accordingly, Permit No. 3452's permit term authorizing PM emissions from the two cooling towers is improper. Thus, PM emissions from these cooling towers have not been properly authorized. To remedy this noncompliance, ExxonMobil's Title V permit must establish a schedule for ExxonMobil to apply for a permit amendment to authorize its cooling tower PM emissions. The Draft Permit's failure to include such a compliance schedule renders it deficient. 42 U.S.C. § 7661c(a).

III. CONCLUSION

ExxonMobil does not need to be given special treatment to operate its business. The TCEQ's lax implementation and enforcement of environmental regulations at the Baytown Olefins Plant is hurting those living near the plant. The Environmental Justice communities surrounding the Baytown Olefins Plant are already overburdened by pollution from many nearby industrial sources and experience health problems related to air pollution at rates greater than city, state, and nationwide averages. The people living in these communities are the ones who need your help. And to help them, you need only do your job. You need only enforce and implement federal pollution control requirements established to protect public health. Please do your job. Please void Permit No. PAL6, revise the Draft Permit to include monitoring provisions that assure compliance with all its applicable requirements, establish schedules for ExxonMobil to comply with permitting and reporting requirements the company has failed to follow, and require ExxonMobil to make public its emission calculations and monitoring methods. This is what the law requires, and good conscience demands.

Sincerely,

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